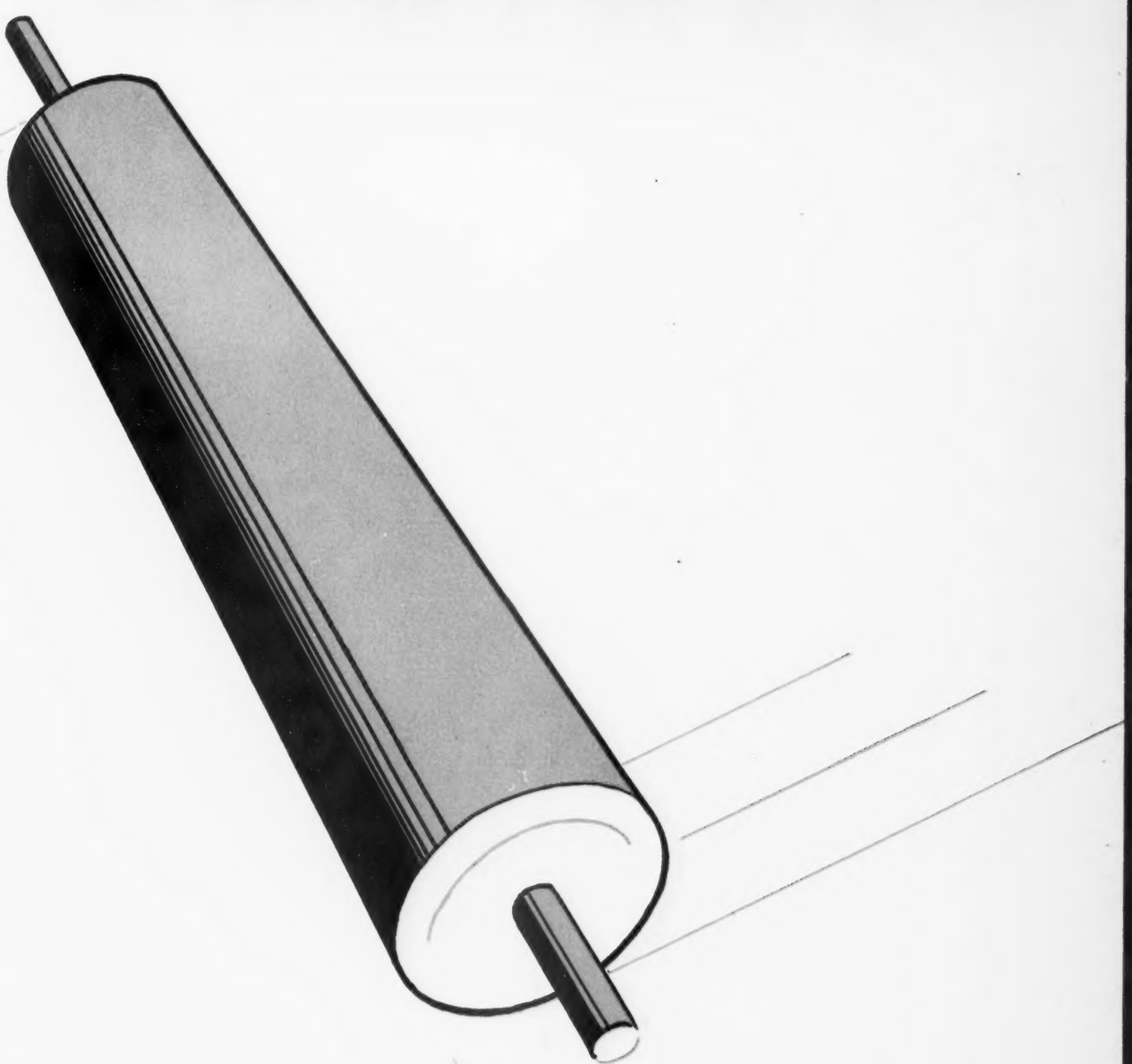
PRINTING EQUIPMENT ENGINEER



MARCH 1937

A TECHNICAL PUBLICATION FOR MECHANICAL EXECUTIVES IN THE GRAPHIC PRODUCTION AND ARTS INDUSTRY

THE HOUSTON CHRONICLE

Buys 8 Goss Heavy Duty High Speed Anti-Friction Units, 2 Pairs of Folders

Business is better in Houston. Oil, cotton, and shipping are bringing a new prosperity to its growing population. Retail sales are up — factories are busy — homes are being built — more new cars are being bought. . .During the past three years, The Houston Chronicle has enjoyed a daily circulation gain of 28.6% and a Sunday gain of 32.6%.

To meet the mechanical demands of this increase — to provide better facilities for handling more local and national advertising — to make sure of quality printing at greater sustained speed. . .The Houston Chronicle has ordered the installation of eight Goss Heavy Duty High Speed Anti-Friction Units and two pairs of folders. This will permit a maximum speed of 60,000 64-page papers per hour from one delivery. By using both pairs of folders, production can reach 240,000 16-page sections per hour. Complete Goss color arrangements will permit The Houston Chronicle to offer its advertisers full r.o.p. color, produced at regular press speeds without sacrifice of quality.

This will be the first installation of the latest Goss Heavy Duty Anti-Friction Presses in the Southwest and extends the "swing to Goss" from the Atlantic to the Pacific, from the Great Lakes to the Gulf. It indicates a decided preference for Goss engineering among leading publishers both here and abroad. It gives cause for due consideration on the part of other publishers who are almost ready to increase or replace their present equipment. Write to the Goss Research and Engineering Department for complete facts, figures, and comparative data.

THE GOSS PRINTING PRESS CO., PILSEN STATION, CHICAGO

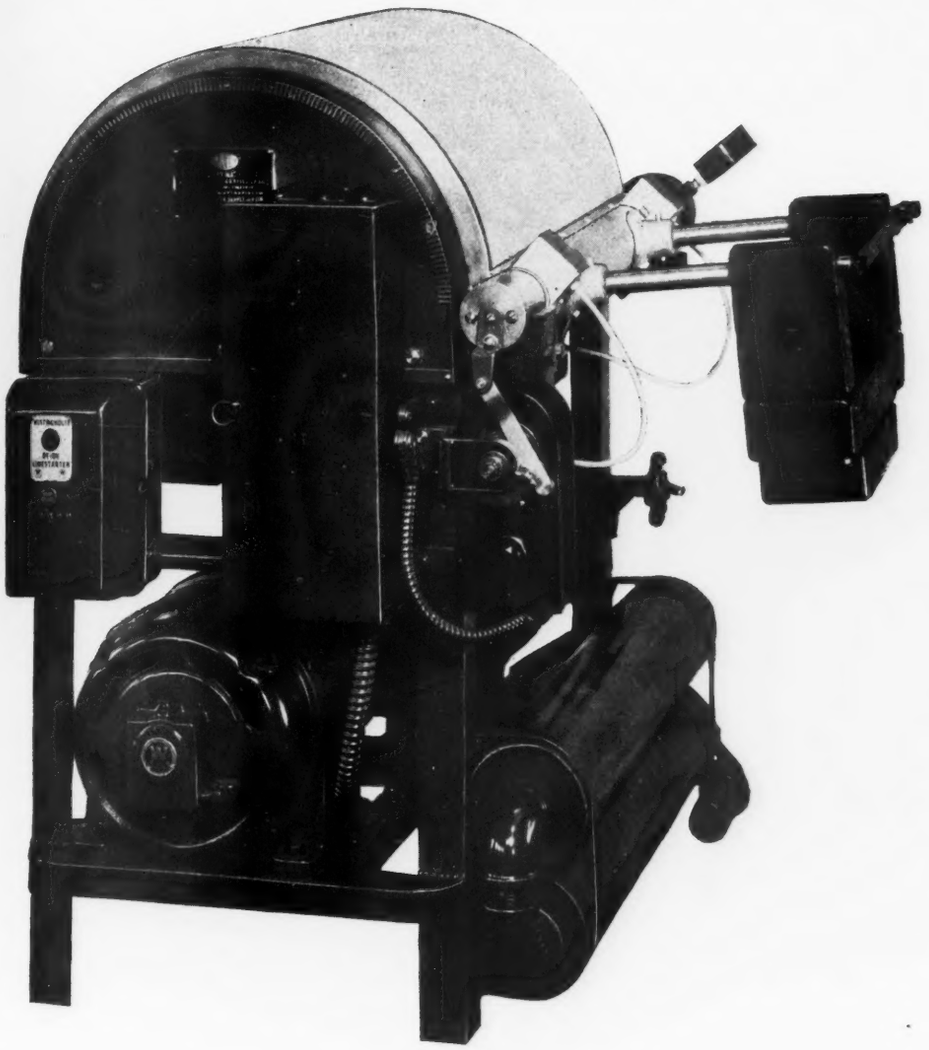
NEW YORK: 220 EAST 42ND STREET

SAN FRANCISCO: 707 CALL BLDG.

GOSS FOSTER, LTD., LONDON, ENG.

GOSS

SCIENCE AND MACHINES



153rd

AUTOFORMER

NOW

IN

PRODUCTION

Machines are manifestations of science and alter processes of production. **The Autoformer machine** has revolutionized dry-mat routine by **increasing productivity** per man hour of work—effecting **Uniform Casting and Printing Levels.** Automatic operation—no hand labor drudgery—**Higher Standards.** Now is the time to consider **The Autoformer at current prices.**

STAHI NEWSPAPER SUPPLY COMPANY, INC.

1020 CROCKER STREET
LOS ANGELES, CALIF.

538 So. CLARK ST.
CHICAGO, ILLINOIS

417 OREGONIAN BLDG.
PORTLAND, OREGON

AGENCIES:

GOSS PRINTING PRESS COMPANY, Chicago, New York, San Francisco
CERTIFIED DRY MAT CORPORATION, 342 Madison Avenue, New York
DUPLEX PRINTING PRESS COMPANY, Battle Creek, Michigan
WOOD FLONG CORPORATION, Hoosick Falls, New York
BURGESS CELLULOSE COMPANY, Freeport, Illinois
R. HOE & COMPANY, New York, Boston, Chicago, San Francisco
WOOD NEWSPAPER MACHINERY CORPORATION, New York, N. Y.
WALTER SCOTT & COMPANY, Plainfield, N. J.

Foreign Agencies:

GOSS PRINTING PRESS COMPANY of London, England
A. M. CARNEIRO & COMPANY, New York, N. Y.
TORONTO TYPE FOUNDRY COMPANY, Ltd., Toronto, Montreal, Winnipeg, Canada

Executive Cost Control

By L. E. BAUERFEIND*

Accountant describes forms used and analyzes their use in newspaper composing room cost system discussion

II.

THE records necessary in the use of this system are memorandum records but could well be used as a part of your bookkeeping system. Two forms are used in keeping track of payroll and employe efficiency. First is the Time Ticket (Illustrations A and A1). The Ticket A is for use by machine operators and Ticket A1 is for the use of hand men in the ad alley. This ticket should measure 8½ in. by 5½ in., or less in size so that it will fit the copy board of a composing machine. It shows the number of hours and minutes worked by the employe on each different kind of work, the total hours and wages due. That is the bookkeeping function. But its usefulness goes further than that.

To a large extent this ticket eliminates "passing the buck" between the editorial and advertising departments and the composing room because it shows what time of the day each different classification of copy went on the machine, how long it took to set it and what time it was finished.

When the operator goes to work at the beginning of his shift he secures a time ticket and fills out the blanks for his name, machine number, starting time, etc., and places the ticket on his copy board. As the operator completes a "take" of copy he draws a line opposite its classification to the time of day. With the completion of the next "take" the line is extended, etc., until the shift is completed. This takes very little time and is a great aid to efficiency and control in your composing room. From it you discover how long it took the operator to finish that 20 inches of classified or the 60 inches of heads. It enables you to know which man is the best on different classifications of work so that you may give him those classifications. The scope of usefulness of this time ticket is only limited by your own ability to analyze it and the number of classifications you may find desirable to use.

*The American-Statesman, Austin, Texas.

Ad Alley Time Ticket

In the advertising department (ad alley) the ticket will of necessity be different from that used on line-casting machines. The advertising ticket (shown in Fig. A1) should show name of each ad the compositor set, its size, whether local or foreign, and the time required.

The hours and wages information of the time ticket (Fig. A and A1) is transferred daily to the Monthly Individual Payroll Record (shown in Fig. B). This record tells you how many hours the employe worked, how much money he earned, gives the number of inches of type matter he actually produced and gives his efficiency rating which you have calculated and entered from his galley proofs. It shows you instantly which is the valuable employee and which isn't. It shows you when a man begins to slow up on his production—and, knowing that you keep these records the psychological effect is to keep your force on its toes.

Advertising efficiency multipliers will of course differ from those used on line-casting machines. They should be from 0.10 to 4.00 according to the difficulty of the composition. Based national advertising with set signature might reasonably take an efficiency multiplier of 0.10 while some other complicated composition would carry a multiplier of 4.00 or perhaps even greater.

We have now completed the compilation of workmen's individual production records. We should know how much each workman has produced per shift in the past and the past should forecast what we can expect in the future. We should be able to approximate very closely how much any number of our employees will produce in a given length of time.

We have seen the use of these records in controlling the efficiency of individual employees and individual efficiency of course leads to general efficiency.

Waste Elimination

We now come to what I consider the most important part of this article: The elimination of waste. Theoretically we have weeded out the inefficient employees.

(*Continued on Page 18*)

TIME TICKET, (Machine)

Date.....193..... Approved: Hours: Regular Overtime

....*

Name Foreman

Nature of Work

2, etc. for number of hours of regular work day

ADVERTISING	6	12	18	24	30	36	42	48	54	60
Reg. and Correct Proof Reading										
NEWS:										
Regular										
6 Point										
Classified										
Tabulated										
Heads										
Leads										
Editorial										
Proof Reading										

TIME CLOCK RECORD				
Total Hours	Regular In	Lunch Out	Lunch In	Regular Out

EMPLOYEES DAILY PRODUCTION

Actual Inches.....

Efficiency Inches.....

*Make separate ticket for Overtime.

Fig. A

The handling of Elrod strip here illustrated, though not required in composing room practice, demonstrates clearly the solidity of Elrod product.

ELROD strip is truly solid!

ONE of the main reasons why Elrod leads, slugs, rules, and base function so satisfactorily in the composing room is that they are strips of solid metal, throughout their entire length free from air holes, porosity, or brittle breaks and welds.

This solidity results from the basic Elrod principle of flowing a continuous body of molten metal through a water-cooled mold or die in which the material is shaped as the metal solidifies.

Because of this solidity, demonstrated most graphically in the illustrations above, Elrod base and rules stand up under the most severe pressures in dry mat stereotyping.

The entire range of strip material from one point to 36 points in thickness may be produced with one easily-operated machine. With an ample supply of Elrod leads, slugs, rule, and base, make-up is simplified, lock-up facilitated, production costs cut and closing schedules made easier to meet.

Yet the Elrod, simple in both operation and in mechanism, is economical in first-cost and maintenance. It requires the minimum of operator attention. Once the strip is started, the operator needs only at intervals to replenish the metal in the crucible and to remove the product from the delivery table.

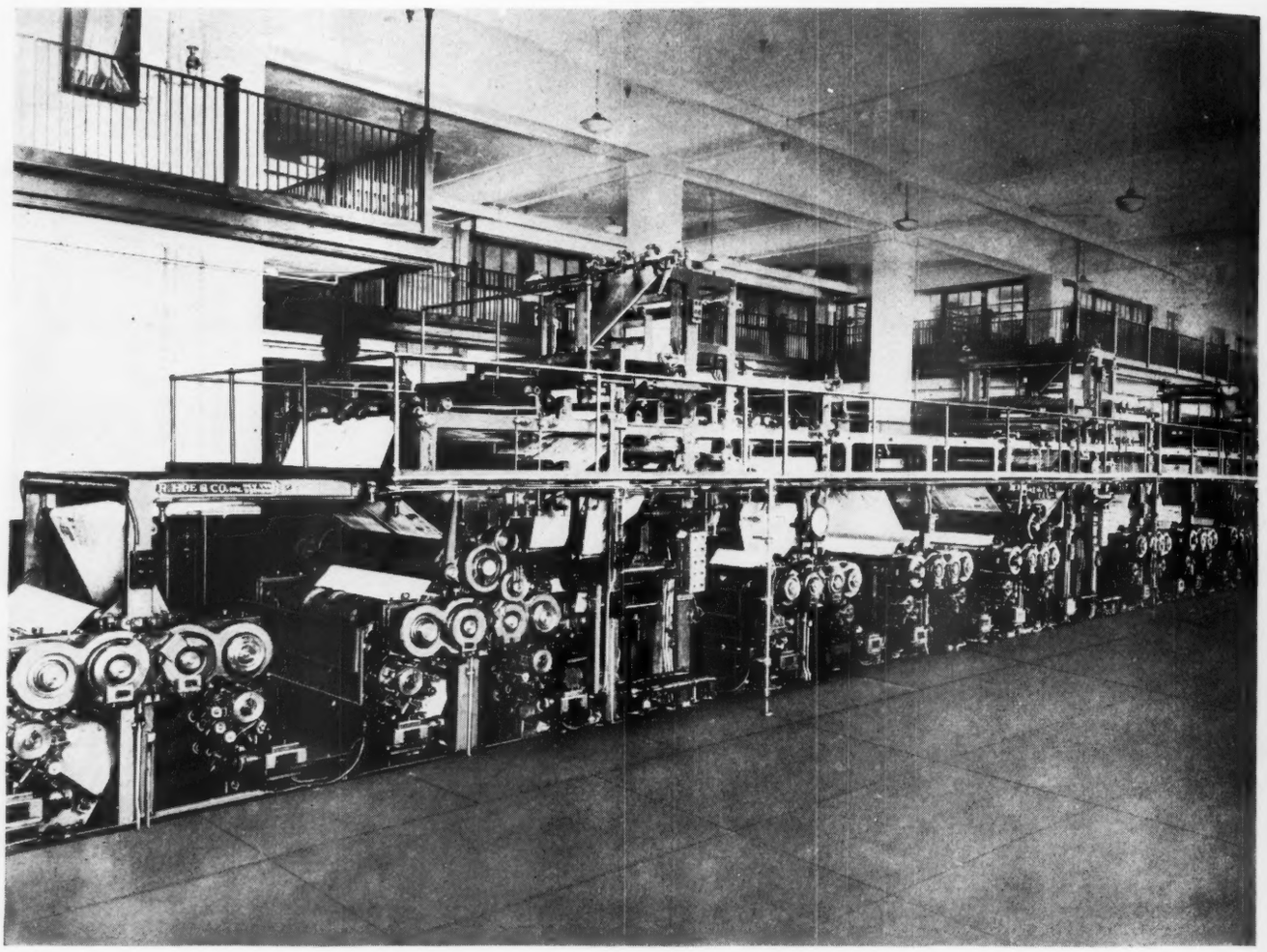
The Elrod will prove a profitable addition to your plant composing room. Write us today for prices and complete information.

Set in members of Ludlow Karnak and the Tempo families.

LUDLOW TYPOGRAPH COMPANY

2032 CLYBOURN AVENUE + + + + CHICAGO, ILLINOIS

The Asset Values of Goodrich Printers' Rollers Are Summed Up in the Evening Public Ledger



View showing portion of the Philadelphia Evening Public Ledger's 48 press units which are equipped with Goodrich Printers' Rollers.

GOODRICH Printers' Rollers have contributed no small part to the Philadelphia Evening Public Ledger's reputation for high quality printing. As one of the pioneer Goodrich users, their first installation dates back to 1921. These rollers proved so successful that, today, the greater portion of their 48 press units are Goodrich equipped.

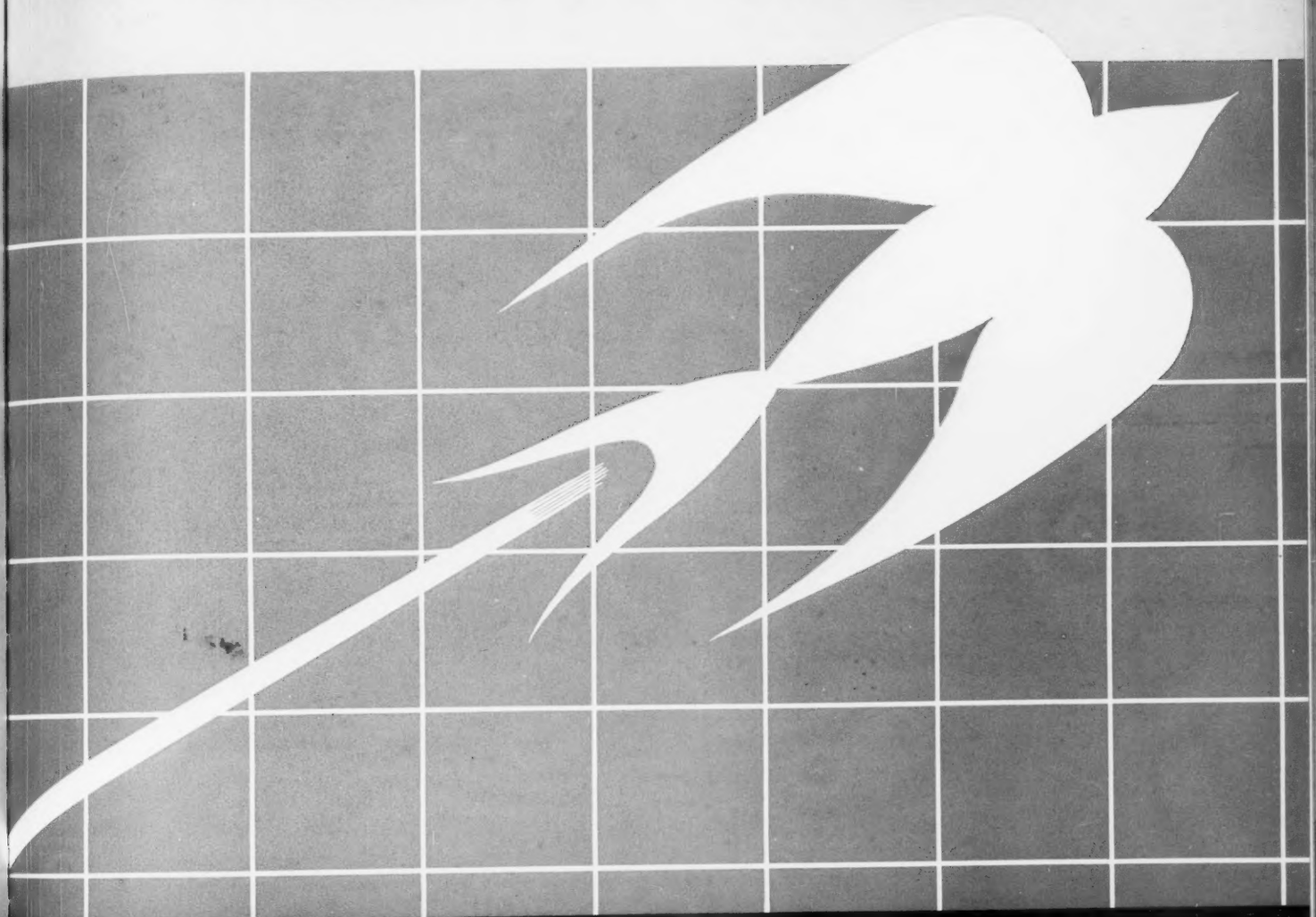
But better printing is not the only advantage of Goodrich Rollers which has made them a favorite in the Ledger's pressroom. Some of the rollers, which were a part of the original installation, are still running, after many years' continuous service, without having been recovered. Long life, freedom from delays due to washup and resetting, continued efficiency regardless of temperature — every one of these features has made for smoother and more economical press operation.

Through the use of Goodrich Printers' Rollers you, too, can dress up the appearance of your paper at a lower printing cost. You can check these facts by simply visiting the pressrooms of nearby Goodrich users. A list of such papers in your locality, along with prices and complete information, can be obtained by writing Niles and Nelson, Inc., New York.

NILES & NELSON, INC., EXCLUSIVE DISTRIBUTORS
75 West Street, New York · 400 West Madison Street, Chicago, Ill.

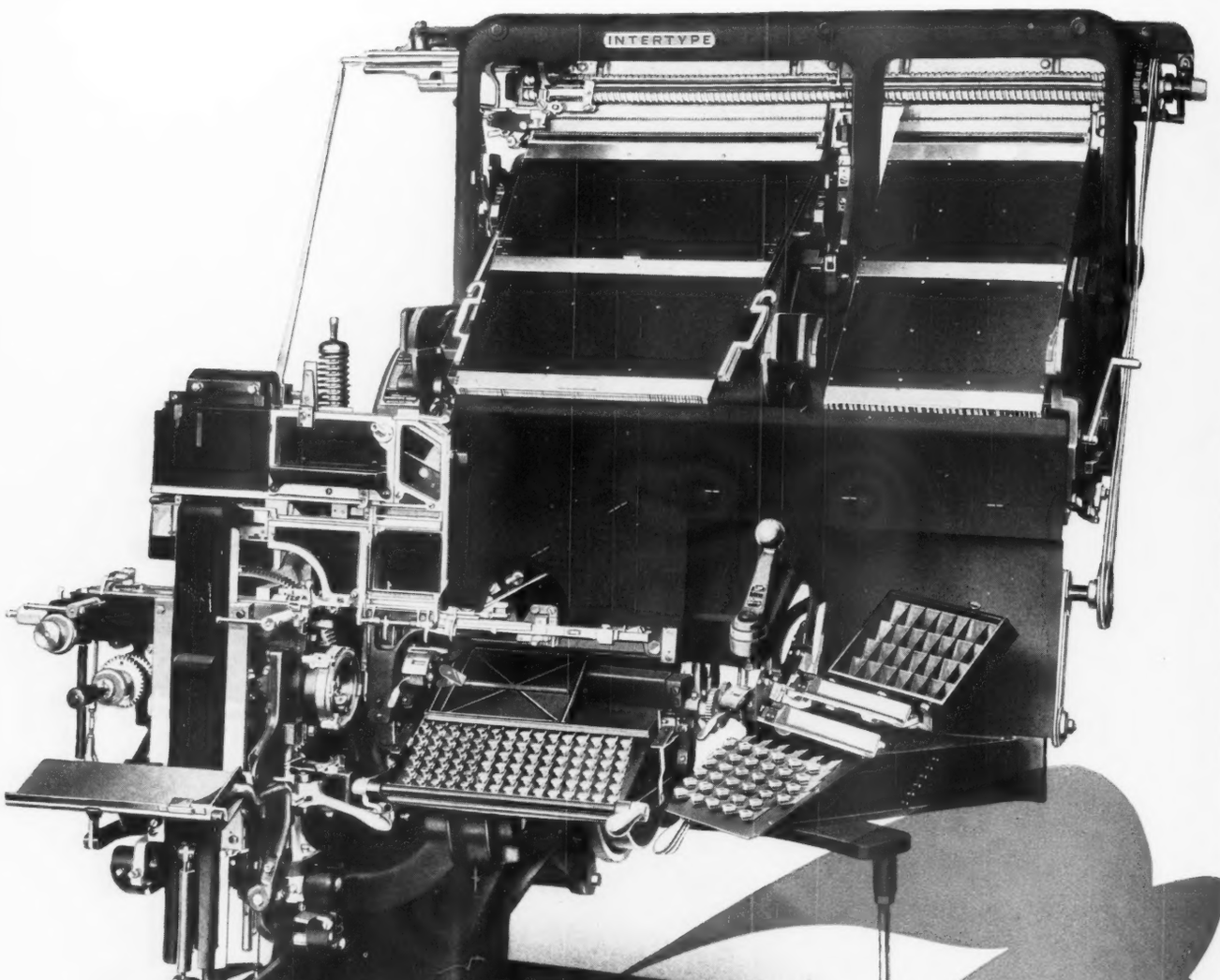
Goodrich *Printers'* Rollers

STREAMLINE
FOR A
PROFIT LINE



WITH
STREAMLINED INTERTYPES

PROFITS GO UP



STEP AHEAD WITH THE NEW

AS COSTS GO DOWN

THE NEW STREAMLINED INTERTYPES

WILL CUT YOUR COSTS IN 101 WAYS

THE NEW Streamlined Intertypes embody the latest developments for economical type composition . . . the latest features for increasing profits by reducing costs.

★ But these remarkable machines do more than cut costs. Even more important than economy, in many composing rooms today, is the need for increased production . . . for faster type composition . . . quicker changes from one font to another . . . fewer interruptions of productive operation.

★ All of these 1937 needs are met by the new Streamlined Intertypes.

★ Due to maximum magazine capacity . . . as many as eight magazines on a single machine . . . the new Intertypes give the operator a remarkable range of type faces and sizes, all quickly available from his position at the keyboard. There are fewer interruptions for magazine replacements. More time is spent on productive work at the keyboard.

★ The new machines are as modernized in performance as they are in appearance. They are flexible, versatile, quickly adaptable to the work required. They are always hungry for copy and they like a varied diet.

★ Keep ahead of competition! Streamline your composing room production with Streamlined Intertypes! Printed matter will be sent on request. Please address Intertype Corporation, 360 Furman Street, Brooklyn, New York, or the nearest Intertype Branch.

STREAMLINED INTERTYPES

101 FEATURES OF THE NEW STREAMLINED INTERTYPES

★ THE NEW Streamlined Intertypes embody features designed to save time and accelerate production . . . features which facilitate changes from one font of type to another . . . features which preserve Intertype's simplicity, accessibility, and ease of maintenance . . . features which promote continuous production and prevent costly delays . . . and safety features which protect the operator from injury, prevent damage to the machine, and forestall interruptions of service. Here are a few of the 101 features:

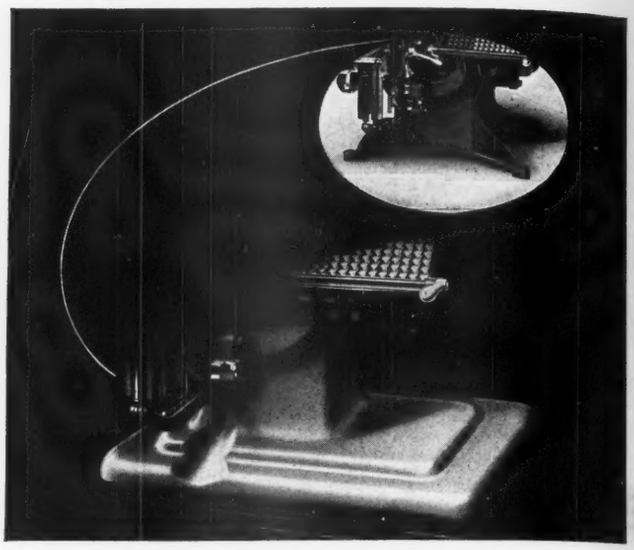
★ **Modern streamlining** . . . covers over moving parts . . . dull finishing of all plated surfaces (to prevent disconcerting glare).

★ **New streamlined base.** Provides a wider and firmer foundation, with a lower center of gravity and a better distribution of weight. These features . . . and the fact that the new base is ninety pounds heavier . . . reduce vibration and thus promote better distribution and smoother machine operation generally.

★ **Finger-tip changes** from one font of type to another (on mixer models). Feather-touch levers are provided for making these changes, conveniently located at the left of the main keyboard and at the left of the side keyboard.

★ **New Four-deck side unit** carries four wide auxiliary magazines stacked flatwise. All magazines, both main and side, are removed and replaced from the front.

★ **One-handle control** of both main and side magazines. On all of the new Streamlined Intertypes, a simple, quick and easy-to-operate shift handle changes from one magazine to another—or, on the four-deck mixers, from one pair of magazines to another. The same handle operates either main or side magazines; a simple switch changes the action from one stack of magazines to the other. A new method of counterbalancing the weight of four-magazine units, to provide easy shifting of magazines, is simpler and more effective than ever before.



NEW STREAMLINED PEDESTAL BASE. Note the striking modern design as compared with old style base in the insert

★ **Alumilite magazines.** Special aluminum magazines are available in full length, three-quarter length, and half length. In addition to lightness of weight, these magazines have the advantage of a special black processing which provides lasting new appearance and full protection against corrosion. This special processing also insures prompt matrix response.

★ **Streamlined** four-deck Model G Mixers can be furnished with two wide 72-channel magazines for display composition and two standard 90-channel magazines for straight-matter composition. Or this machine can be furnished with one 72 and three 90-channel magazines, or with one 90 and three 72-channel magazines. Both types of magazines are interchangeable on other Intertype machines.

★ **The 101 features** include also two-letter 18 and 24-point matrices and other recent developments, as well as automatic quadding and centering, low-slug quadding, automatically justified indentions, and other profitable features.

★ **A complete list** of the 101 features of the new Streamlined Intertypes, with illustrations, will be furnished on request.

INTERTYPE CORPORATION • 360 FURMAN STREET • BROOKLYN, N. Y.

PRINTED IN U.S.A.

Printing Equipment Engineer

Trade-Mark Registered U. S. Pat. Office

March, 1937
Volume 53 No. 6

A Monthly Publication

ESTABLISHED 1910

Member of Controlled Circulation Audit

CCA

Publication Office:
1276 W. THIRD ST., CLEVELAND, O.

Eastern Manager:
RUSS BIRCHFIELD, 509 FIFTH AVE., NEW YORK, N. Y. Phone Vanderbilt 3-5191

Western Manager:
E. P. BLOOMSTER, 232 E. ERIE STREET, CHICAGO, ILL. Phone SUPerior 2444

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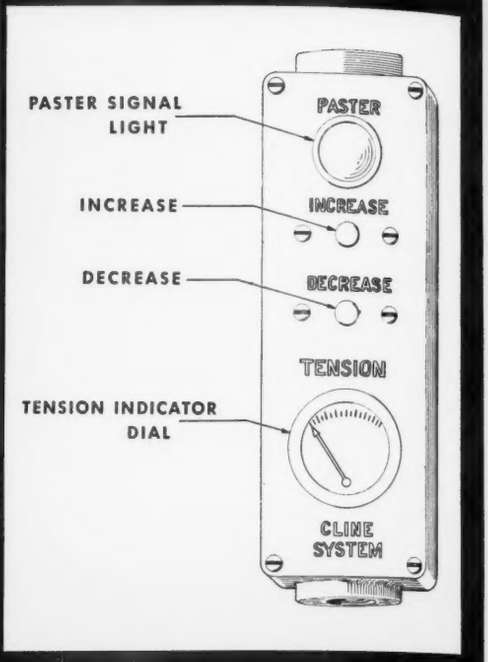
A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.

Published by Don Will • Edited by Mac Sinclair
Associate Editors: Ira D. Pilliard, Adam Henry Reiser



Your Pressman Will Tell You

that Automatic Electric Tension adjustable and indicated at the pressroom level, with slur eliminator, is more important than any kind of pasters.

You can get combined Cline Automatic Electric Tensions and Cline High Speed Pasters, a combination that can't be equalled for web control. This insures constant tension while paster is made.

Used on presses that run at the highest speed, have the highest production average and print the finest picture pages.

Get facts on Tensions and Pasters and Motor and Control equipment from us when considering new equipment or increasing the efficiency of your old equipment.

CLINE ELECTRIC MFG. CO.

MAIN OFFICE: 211 W. WACKER DRIVE, CHICAGO, ILL.

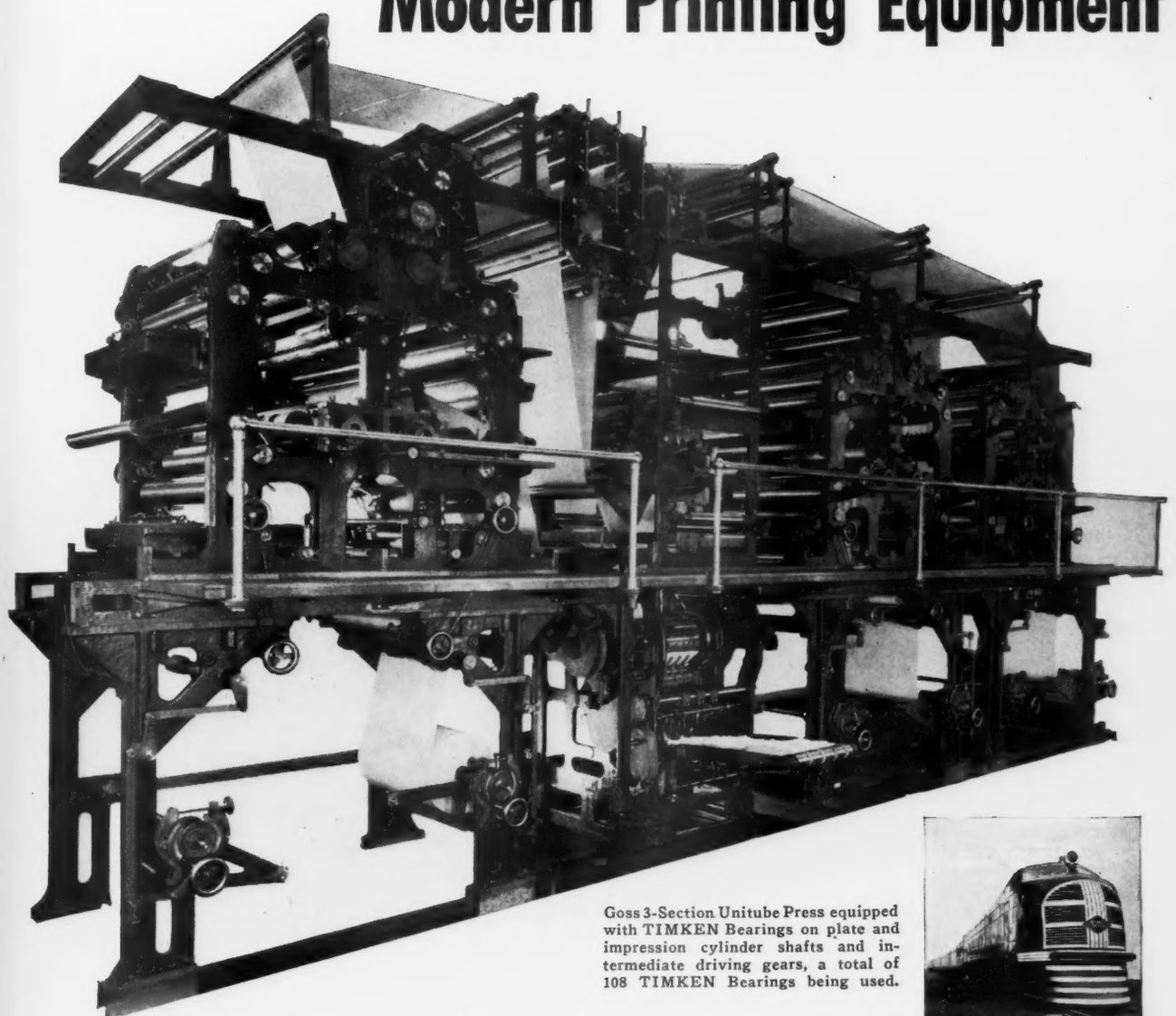
Western Office
CROCKER FIRST NAT'L BK. BLDG.
SAN FRANCISCO, CALIF.

Eastern Office
220 EAST 42nd STREET
NEW YORK CITY

CLINE SYSTEM

QUALITY NAME SERVICE FAME
CLINE ELECTRIC MFG. CO. CHICAGO
CLINE WESTINGHOUSE

for SPEED and PRECISION in Modern Printing Equipment



Goss 3-Section Unitube Press equipped with TIMKEN Bearings on plate and impression cylinder shafts and intermediate driving gears, a total of 108 TIMKEN Bearings being used.

THE GREEN DIAMOND. Illinois Central Railroad. Another crack Timken Equipped streamliner.

As printing speeds have been increased in response to modern production demands the bearing question has presented a stiffer and stiffer problem to press manufacturers. It is not only a matter of reducing friction, but of securing and maintaining extreme operating precision as well, for as speeds have gone up so have quality standards.

Modern presses equipped with *preloaded* TIMKEN Bearings on plate and impression cylinder shafts and at other important points are capable of turning out more and better printing per hour than has ever been accomplished before. Printing costs are lowered in two ways: (1) by the saving of time (2) by the reduction of press operating and maintenance expenses.

The majority of printing equipment manufacturers are familiar with the merits of TIMKEN Bearings through their use on the spindles of modern heavy duty machine tools where extreme precision must be maintained and operating tolerances as close as one ten-thousandth of an inch are frequently demanded. It will pay you to have this precision in your presses.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

Manufacturers of Timken Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; Timken Alloy Steels and Carbon and Alloy Seamless Tubing; and Timken Rock Bits.

TIMKEN
TAPERED ROLLER BEARINGS

THE STAHI POWER.

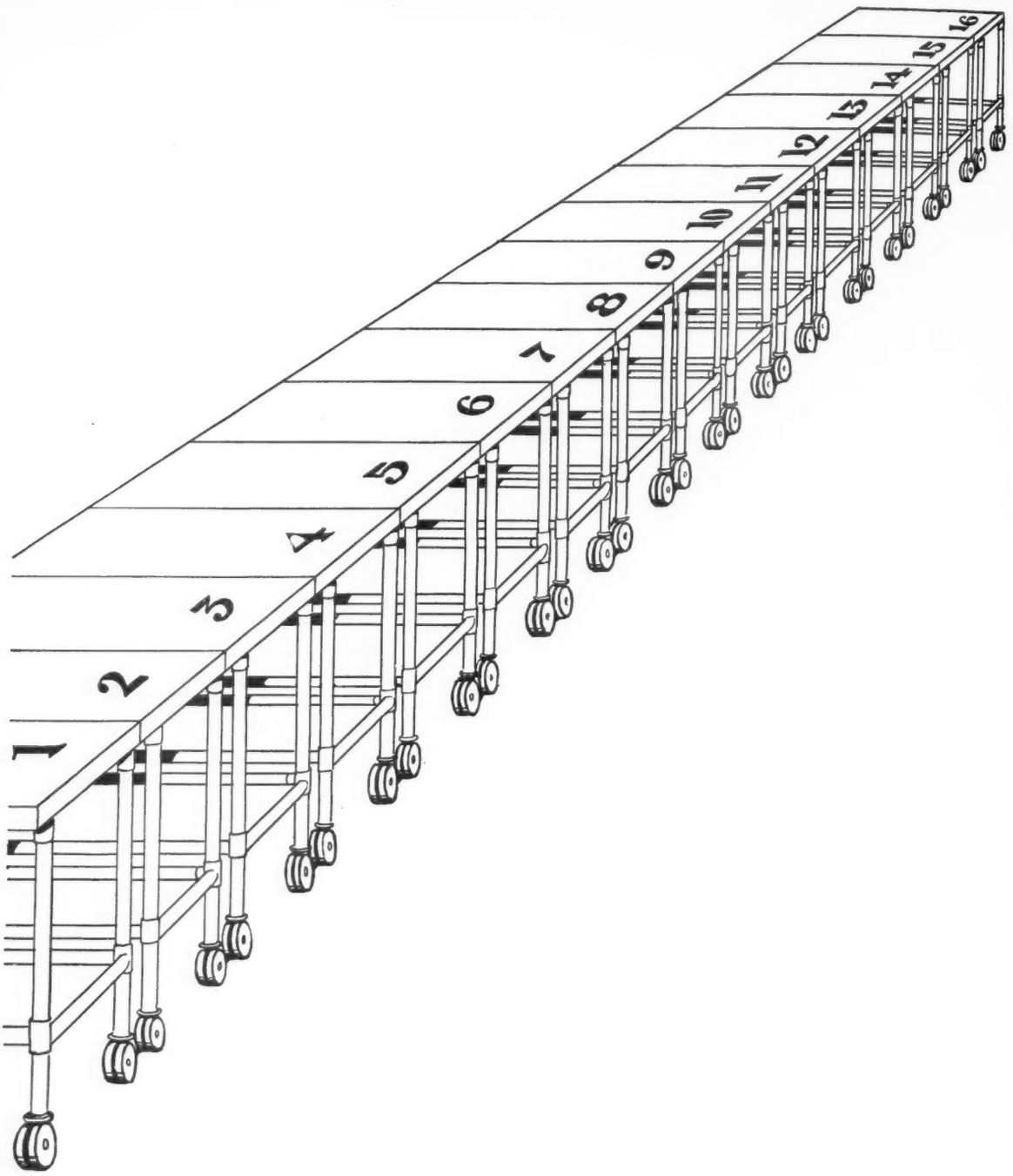
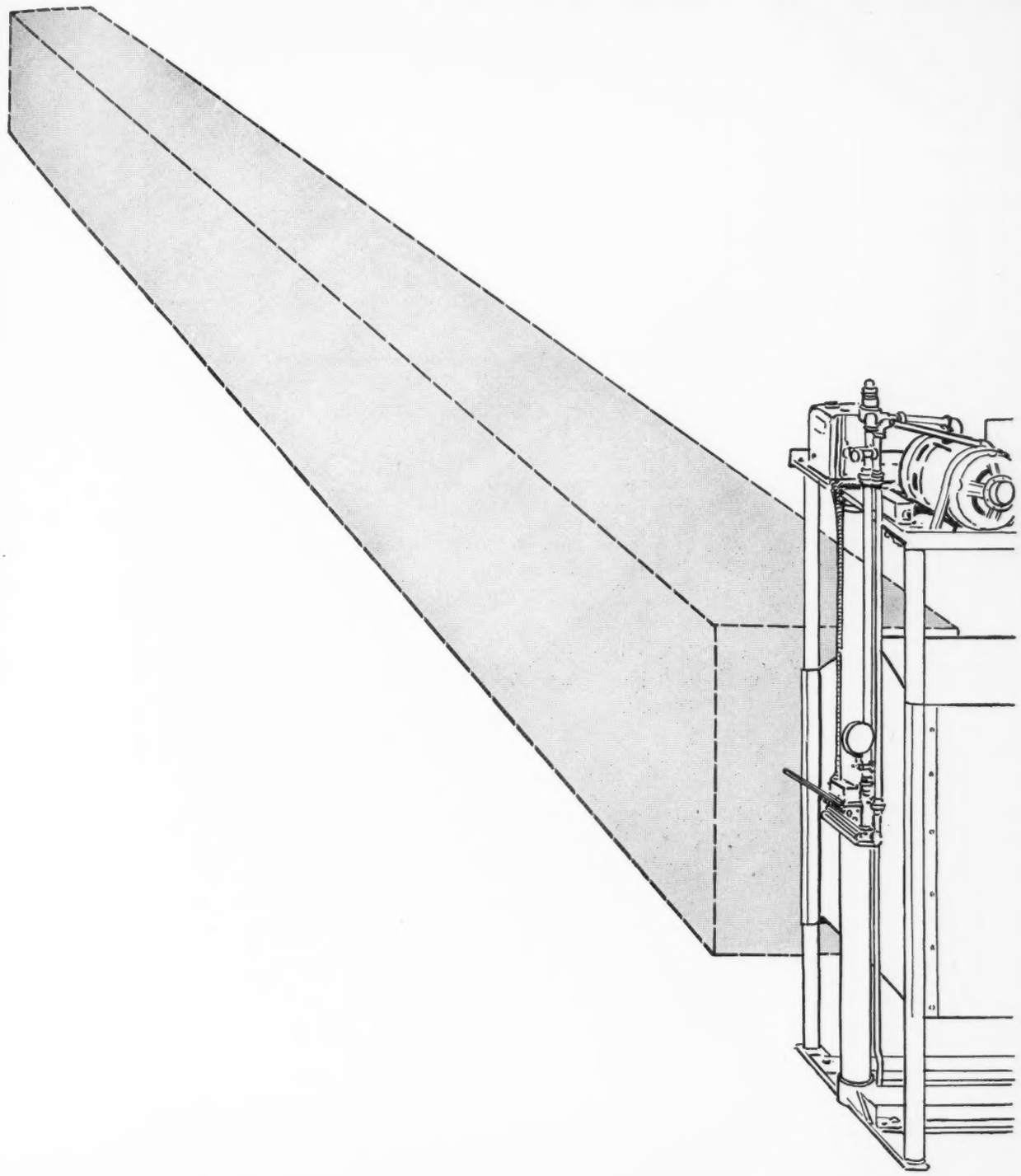


Illustration above indicates graphically the space **16 Make-Up Trucks** occupy—taking up approximately—**166 Square Feet of Floor Space,** including operating space. See opposite page for the **Modern Way** of filing forms, **eliminating Make-Up Trucks.**

-LIFT FORM FILE



The above illustration shows graphically the gain in space outlined by the shaded cube—with the use of **The Stahi Power-Lift Form File,** which occupies only 10 Square Feet of floor space, thus leaving a gain of **156 Square Feet of useful Composing Room floor space** —by taking care of 16 forms and chases. **Write us for full particulars.**

STAHI NEWSPAPER SUPPLY COMPANY, INC.

1020 CROCKER STREET
LOS ANGELES, CALIF.

538 So. CLARK ST.
CHICAGO, ILLINOIS

417 OREGONIAN BLDG.
PORTLAND, OREGON

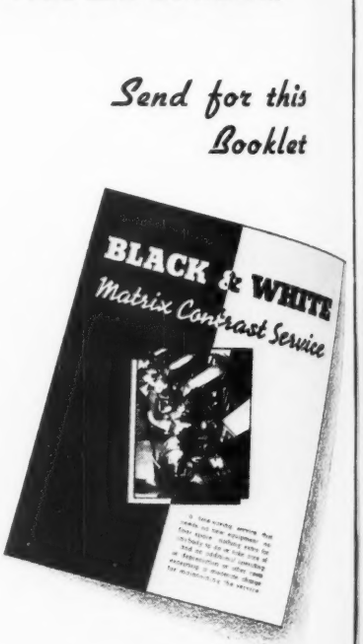
Operator	Before Installation			After Installation			Per cent Reduction in Total Errors*
	Lines Set	Total Errors	Total Errors per 100 Lines	Lines Set	Total Errors	Total Errors per 100 Lines	
One	5,657	300	5.31	6,759	254	3.75	29.00
Two	6,070	326	5.37	6,384	208	3.25	39.00
Three	1,918	107	5.58	878	38	4.32	23.00
Four	5,638	227	4.03	5,834	184	3.15	22.00
Five	5,731	281	4.90	5,510	184	3.33	32.00
Six	1,920	63	3.28	2,510	47	1.87	43.00
Seven	4,549	153	3.36	2,592	65	2.50	26.00
Nine	4,545	218	4.79	3,520	134	3.80	21.00
Eleven	1,131	34	3.00	1,061	28	2.63	12.00
Twelve	3,366	163	4.84	1,487	58	3.90	19.00
Thirteen	310	31	10.00	3,005	91	3.02	70.00
Fourteen	1,433	97	6.76	5,279	180	3.40	50.00
No Slug	7,573	365	4.81	9,132	299	3.27	32.00
	49,841	2,365	4.75	53,951	1,770	3.28	30.95

PROOF

that Matrix Contrast Service
REDUCES ERRORS

SHOWN ABOVE is a typical tabulation of errors in newspaper composition *before and after installation of Matrix Contrast Service.* Note that in this case errors were reduced nearly 31 per cent . . . a reduction somewhat below the usual average for news composition. Thirty-eight surveys of this kind, summarized in the booklet shown at the right, show a 33.70 per cent reduction in total errors. This figure was obtained by checking more than three million lines of composition produced by 1087 operators.

Send for this Booklet



These and other figures in this booklet are well worth your consideration. Send for it!

Think of the savings of time, the increased production, the elimination of waste effected by a one-third reduction of errors! Ask your neighbor who is using this time-tested and dependable service. Do it now . . . while you have it in mind.

MATRIX CONTRAST CORPORATION

EMPIRE STATE BUILDING, NEW YORK

SOLE LICENSEES OF THE PERCY L. HILL MATRIX CONTRAST PATENTS NOS. 1,466,437 AND 1,796,023

House of Glass

By STAFF WRITER

Diffused daylight transmitted through walls of fine new home sheltering personnel and equipment of American Education Press, Inc., Columbus, Ohio.

A FINE new building constructed of reinforced concrete and Owens-Illinois glass blocks is now occupied by American Education Press, Inc., at Front and Fulton Streets, in Columbus, Ohio. The building occupies a land area of approximately 147½ feet by 187½ feet in the business section of Columbus and was constructed especially to meet the needs and convenience of the company.

Here are created and printed a number of weekly periodicals of varying format and contents used by public, private and parochial schools throughout the United States. The business, editorial and production personnel consists of approximately 200 people.

Architects Richards, McCarty & Bulford, Columbus, designed the building which was erected by the contracting firm of E. Elford & Son, also of Columbus.

On the first floor of the three-story building are the reception vestibules and the mailing, shipping, and book storage departments. The production departments are located on the second floor. The editorial and business offices occupy the third floor. Production Manager C. E. Richards actively represented the company in the planning and erection of the building.

When asked the reason for selecting glass block for construction of the walls of the new plant, Mr. Richards said: "Our first consideration was to obtain the maximum amount of natural daylight. Street exposure on all sides of the building enabled us to have the maximum amount of window area. We found that glass block would transmit almost as much light as standard factory sash while its prismatic effect diffused the light into the interior of our large floor areas more effectively.

Employment and Service Department

for Readers of

Printing EQUIPMENT *Engineer*

Employers, production and mechanical executives may insert notices in this department.

Items for this department may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted;" readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing* EQUIPMENT *Engineer*, 1276 West Third St., Cleveland, O.

MECHANICAL SUPERINTENDENT—Wants connection with well established daily newspaper in southern Texas. Ten years experience in morning and afternoon newspaper production. Reply Box 10.

MECHANICAL SUPERINTENDENT—Desires to make change for advancement. Young, married, competent, experienced in efficient production and management of personnel. Prefer daily newspaper field, but will consider commercial plant proposition. Reply Box 9.

GENERAL SUPERINTENDENT—Capable of taking charge of any size plant. Have handled around $2,000,000 worth of printing per year for several years. Now employed. Best reasons for wishing change. Reply Box 11.

MANUFACTURER WANTED—Inventor wishes to contact manufacturer or supplier who will promote sale of device called Keyboard Cam Oiler for line-composing machines. Small instrument holding a quantity of clock oil is used to lubricate bearings of cams in just the right amount without waste of oil. Reply Box 12.

PLANT EXECUTIVE—Thoroly capable of taking complete charge any size plant, knows costs, finance, production. Will invest into small plant. References. Now employed but desires change. Any location. Reply Box 13.

Then, being hollow, the glass brick wall has an insulating value equivalent to that of a 13-inch brick wall. This greatly cuts down the heat loss through the large window areas, making appreciable savings both in the original cost of our heating system and its annual operating cost.

"Maintenance problems are simplified because the collection of dirt on the glass block wall is not as noticeable, either outside or in, as on windows. Therefore, it does not require as frequent washing, an item to be seriously considered when 15,000 square feet of window is involved."

Third Floor Office Features

On the third floor are located the private offices of the executives and editors, the library, cut-file room, art department, and circulation department. The private offices are arranged along the south and west sides of

View of one side of the mailing department in new plant of American Education Press, Inc., Columbus, Ohio.

the building with outside exposure. The art department is provided with northern exposure, and the other departments, which occupy relatively large floor areas, are lighted by saw tooth skylights in addition to their north and east wall exposure. Glass block is used in the vertical walls of these skylights making the construction simple and giving ample daylight over the entire floor area.

Heating of the private offices is by direct radiation. Large office spaces are heated by ceiling hung unit heaters of the type used in the production departments. Westinghouse Magnalux semi-indirect lighting units

EXECUTIVE GROUP IN PLANT OF AMERICAN EDUCATION PRESS, INC., COLUMBUS, OHIO

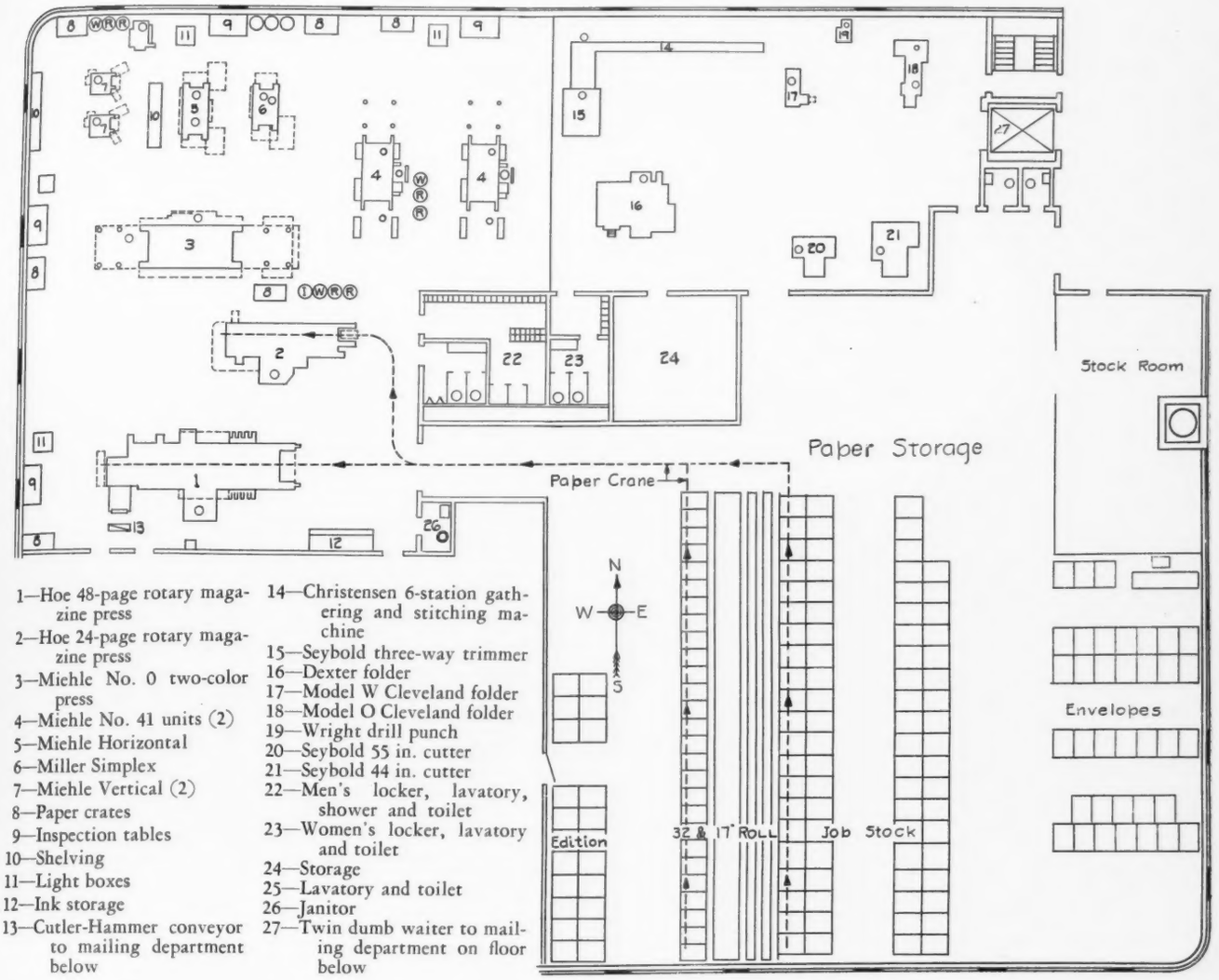
H. M. Sayre, President and Editor-in-Chief

W. C. Blakey, Vice President and Assistant General Manager

C. E. Richards, Production Manager and Assistant Treasurer

R. N. Betts, Purchasing Agent

DIAGRAMMATICAL LAYOUT OF THE PRESSROOM AND PAPER STORAGE IN NEW PLANT OF AMERICAN EDUCATION PRESS, INC., COLUMBUS, OHIO



1—Hoe 48-page rotary magazine press
2—Hoe 24-page rotary magazine press
3—Miehle No. 0 two-color press
4—Miehle No. 41 units (2)
5—Miehle Horizontal
6—Miller Simplex
7—Miehle Vertical (2)
8—Paper crates
9—Inspection tables
10—Shelving
11—Light boxes
12—Ink storage
13—Cutler-Hammer conveyor to mailing department below
14—Christensen 6-station gathering and stitching machine
15—Seybold three-way trimmer
16—Dexter folder
17—Model W Cleveland folder
18—Model O Cleveland folder
19—Wright drill punch
20—Seybold 55 in. cutter
21—Seybold 44 in. cutter
22—Men's locker, lavatory, shower and toilet
23—Women's locker, lavatory and toilet
24—Storage
25—Lavatory and toilet
26—Janitor
27—Twin dumb waiter to mailing department on floor below

The pressroom, paper storage and stock room are heated and air is circulated throughout both departments by Modine Units suspended from the ceiling. Parks-Cramer humidifying system is used to maintain proper conditioning of paper stock in both departments. An overhead traveling crane is used to transfer rolls to the rotary magazine presses. A Yale multi-lift type truck delivers flat stock on skids to the presses.

are used for artificial lighting in the private offices. The entire office floor is floored with asphalt mastic tile.

Production Departments

The Production Departments and Paper Storage occupy the second floor. So far as is possible, all work, processing and stock is routed through the various mechanical departments in straight-line manner.

All of the production departments are heated by Modine Heaters suspended at convenient heights near the ceiling. Low pressure steam is piped to each unit and an electric fan distributes the heated air from the unit coils into the room area. In considering plans for heating, these units were selected so that no floor space would be sacrificed and so that, both in winter and in summer, the fans in the units would circulate and keep agitated the air in each room. Automatic temperature control for these heaters is provided.

PRODUCTION EXECUTIVE GROUP IN PLANT OF AMERICAN EDUCATION PRESS, INC., COLUMBUS, OHIO

L. G. Pike, Mechanical Superintendent

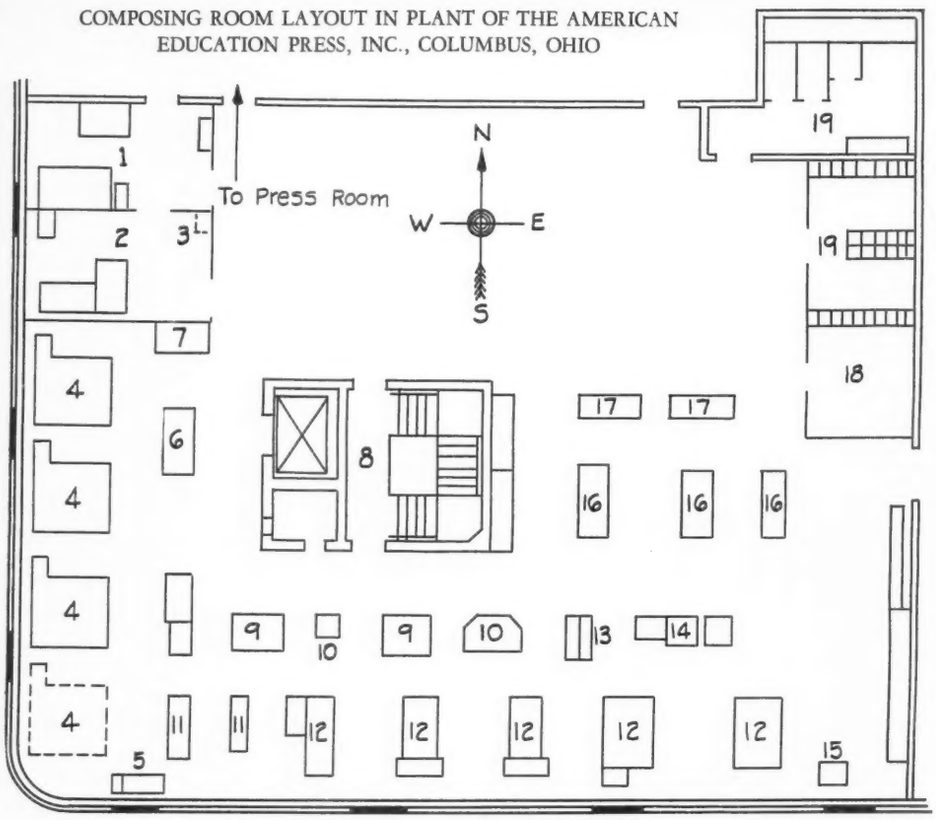
J. A. Kingsbury, Composing Room Foreman

W. L. Montanari, Pressroom Foreman

Allen E. McDonald, Bindery Foreman

J. E. Chittum, Mail Room Foreman

COMPOSING ROOM LAYOUT IN PLANT OF THE AMERICAN EDUCATION PRESS, INC., COLUMBUS, OHIO



1—Mechanical Superintendent Pike's office
2—Composing Room Superintendent Kingsbury's office
3—Specially constructed lift to proof room on floor above
4—Linotypes (3). Outlined space for future installation
5—Machinist's Bench
6—Elrod casting machine
7—Layout table
8—Elevator shaft and stairway
9—Vandercook Proof press at left; Poco at right
10—Saw-trimmers —Dumps
12—Stone and Galley storage
13—Galley storage
14—Trays, type and furniture storage
15—Turtle
16—Type cabinets
17—Cut storage cabinets
18—Designed for metal room; all machines equipped with Monomelt System
19—Locker, shower, lavatory and toilet rooms

Throughout the building, except in the private offices, G-E Ivanhoe fully-enclosed lighting fixtures provide well-spread artificial light on dark days or for night operation.

Flooring for the production departments is of two kinds. In the mechanical superintendent's office, composing room, and mailing departments the flooring consists of side grained maple blocks laid herringbone pattern. In the stock and press rooms, special cement finish treated with metallic hardener is used.

Each of the mechanical departments is provided with locker, toilet and shower rooms. Several of these are indicated in the plan diagrams of the composing and press rooms accompanying this article.

Mechanical Superintendent's Office

The office of the Mechanical Superintendent S. G. Pike, is located between the composing department and press room. Mr. Pike, by the way, holds the distinction of having been the first president of the Columbus Club of Printing House Craftsmen. Through Mr. Pike's office is checked all work for execution in the plant. Inspection is given all forms from the press to see that each one is printed up to a high standard of letterpress work. Mr. Pike keeps for ready reference a complete file of all publications issued by the firm.

The Composing Room

The composing room is operated under the supervision of Foreman J. A. Kingsbury. Copy and cuts are received here for layout and composition. The work is received by Mr. Kingsbury who routes it through the department. There is no back-tracking of operations. Proofs are sent to the proof room on the third floor by means of a specially constructed dumb-waiter.

The mechanical equipment in the composing room consists principally of three Linotypes, Vandercook and Hacker proof presses and an Elrod strip material caster. The Monomelt System is used for melting metal on the Linotypes and the Elrod caster. The composing room has western and southern exposures and natural daylight is diffused through the glass block walls.

All work intended for curved-plate electrotyping for either of the two Hoe rotary presses is locked up in the eastern section of the room for transmittal to the electrotype foundry.

The Stock Room

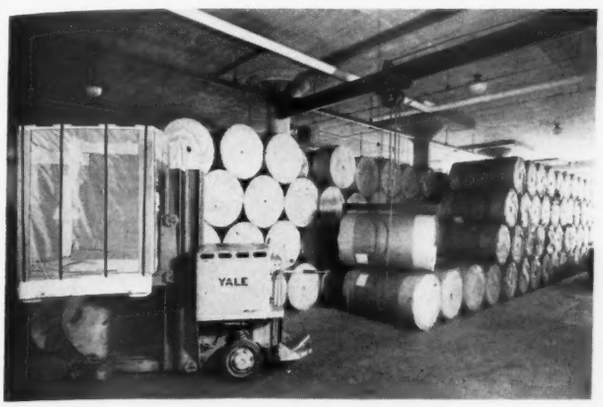
Purchasing Agent R. N. Betts, states that the stock room in the southeast

At left: View of section of pressroom in new plant of American Education Press, Inc., Columbus, Ohio.

section of the second floor is supplied with all appurtenances necessary for keeping stock in proper condition. Paper stock is purchased both in flat and roll form. The flat paper is stored on skids and the roll paper is tiered in horizontal position.

The stock and press rooms are intercommunicating and both are kept at the proper degree of relative humidity by a Parks-Cramer automatic spray humidifying system.

Mr. Betts explained that it is planned to depend on the Modine units working in conjunction with the humidifying equipment to keep the stock in proper



Roll paper stock used by the American Education Press is shifted from the stock room to the pressroom by the overhead traveling crane seen in this illustration. Flat stock mounted on skids is taken to the pressroom by the Yale elevator truck of the lift type.

condition as well as to provide for the comfort of employees. Constantly agitated and circulated air in a room held within certain temperature and humidity limits will guard against printing irregularities which would be encountered with uncontrolled atmospheric conditions.

Flat paper stock is moved about the room on skids or delivered to the press room by a Yale elevator truck of the multi-lift type.

Paper rolls are stored in two sections on either side of an overhead traveling crane system which operates on trucks extending from the southern side of the room into the press room where rolls are delivered to both of the Hoe rotary magazine presses.

Mr. Betts explained further that the building is situated on a lot which slopes downward from the rear to the front of the building at a 20-degree angle. Because of this natural angle, it is possible to deliver paper directly to the stock room receiving door by truck without the necessity for an additional handling by freight elevator to get paper from the delivery trucks to the second floor stock room.

A section of the room is supplied with steel shelving for storing small size paper stock. The aisles between the racks are lighted with lamps in special fixtures. A perpetual inventory is kept of the kinds of stock at all times.

This is called a "chair truck" and is used in the mailing department of the American Education Press plant to convey magazines from the escalator to mailing tables. Each truck holds 1500 copies.

The P-Double-E Filing System

For filing manufacturers' literature and valuable technical articles, production executives should use some system which will keep its contents in such shape that unnecessary thumbing through a pile of miscellaneous printed matter will be obviated. Mark this literature with the proper symbols and preserve it for reference purposes according to the P-Double-E Filing System.

The Pressroom

Foreman W. L. Montanari is in charge of the press room where the entire output of the American Education Press is printed by letterpress.

The equipment in the department consists of a Hoe 48-page rotary magazine press, a Hoe 24-page rotary magazine press, a Miehle No. 0 two-color, Miehle single-color, two Miehle No. 41 units, Miehle horizontal, two Miehle verticals and a Miller Simplex press.

A Cutler-Hammer conveyor carries the various publications from the 48-page Hoe magazine press on the second floor to the mailing department directly under the pressroom.

A Paasche non-offset unit is attached to and works on any of the smaller job presses.

The Bindery

All of the publication products from the press room, except those printed on the 48-page rotary magazine press, are delivered to the bindery department adjacent to the press room. The bindery is in charge of Allen E. McDonald. All covered publications are assembled and stitched on a Christensen six-station gathering and stitching machine. Next to the stitcher is a Seybold three-knife book trimmer. After being trimmed, the publications are delivered to the mailing department on the floor below by a twin, completely enclosed dumb-waiter. Other equipment in the bindery consists of one Dexter Model 189-A folder; one each Cleveland Models W and O folders with G-E drive and control equipment; one each Seybold 55-inch and 44-inch paper cutters; and a Wright power paper drill.

Mailing Department

As is stated above, products from the 48-page Hoe magazine press are delivered by conveyor to the mailing room on the ground floor immediately under the press room. The gathered publications are delivered, as stated previously, by dumb-waiter.

Foreman J. E. Chittum employs an average of 40 persons in his department.

In this department two kinds of special equipment have been provided. These are suitable for the nature of the work involved and from a production standpoint add to production efficiency. One of these, Mr. Chittum explained, is a "chair truck." This is constructed from angle steel after the fashion of a wide setee. Four casters permit pushing these trucks about the room. As the magazines are taken from the conveyor they are piled on the chair trucks. Each truck accommodates three piles of magazines, or a total of 1500. When the truck has been filled, it is rolled to a wrapping table alongside of the mailer working at that table. The position of the magazines on the truck is of a height which permits the mailer to take the required number of magazines without the necessity for stooping or getting off the seat.

Each steel top mailing table top is fitted with a rack for holding a mail bag in open top position.

TIME TICKET, (Hand)

Date.....193..... Approved: Hours: Regular Overtime

....*

Name Foreman

Advertiser	Size Ad	Total Inches	1										2, etc.
			6	12	18	24	30	36	42	48	54	60	
	x												
	x												
	x												
	x												
	x												
	x												
	x												
	x												
Total Inches Composed													

TIME CLOCK RECORD

Total Hours	Regular In	Lunch Out	Lunch In	Regular Out

EMPLOYEES DAILY PRODUCTION

Actual Inches.....
Efficiency Inches.....

*Make separate ticket for Overtime.

Fig. A

Cost Control

(*Continued from Page 4*)

We know that our men are earning their money. But we must not buy more of their product than we actually need in the conduct of our business. We are controlling the individual. Now let us control the mass.

For Fixed Time Employees

Employees whose production it is not advisable to check should use a time ticket showing time in, time out and number of hours worked. This class of employee would include makeup, machinist, galley boys and other miscellaneous labor.

Analyzing the Information

As a hypothetical example let us assume the following:

The coming shift will be required to produce a 16-page paper, eight 21-in. columns to the page, or a total of 2,688 column inches. Of this amount let us say 688 in. are standing matter and flat-cast which will be based in the makeup department. This leaves 2000 in. to be produced. We will presume that 1000 in. is advertising and 1000 in. is news matter.

From our study of individual records we find the following facts:

Our news operators produce an average of 250 in. each per day.

Our advertising machine operators produce an average of 800 in. each of advertising composition daily.

Our advertising hand men assemble 400 in. each per day.

One makeup man with the aid of an apprentice can make up the 16 pages.

Knowing what our men can produce (I say *knowing*—not guessing) it should be a simple matter to calculate the number of men we will require for the given production.

If each operator sets 250 in. per shift and 1000 in. are required, then it is obvious that four news operators are required.

If our advertising operators produce 800 in. per shift and the run is 1000 in. the technical allowance would be 1¼ operators. Sometimes it is advisable in an instance of this kind to work the man overtime but, usually, two operators would be employed, allowing one or both to fill out their time on advance matter or in some other department. Let us presume that the foreman is allowed two men.

If the ad hand men assemble 400 in. each and there are 1000 in. to be assembled the technical allowance would be 2½ men. Presuming one of the ad machine operators is a combination man we will allow only two men to this department. The combination man will work 2 hours on the machine, 4 hours in the ad alley and finish out his time on advance matter.

We then have this labor allowance for the 16-page paper:

	Labor Hours	*Cost*
Makeup	8	$ 8.00
Makeup, Apprentice	8	3.00
News Operators	32	32.00
Ad Operators	16	16.00
Ad Hand Men	16	16.00
Non-Variable Labor, apprentices, galley boys, superintendence, etc		20.00
Total allowance for day		$95.00

This amount, $95.00, then, is what Cost Accountants term the Standard Labor Cost for that edition of your

(*Continued on Page 59*)

MONTHLY INDIVIDUAL PAYROLL RECORD
PRODUCTION AND WAGES

....193.....

Name Kind of Labor Month of

Department..... Production Last Month..... Efficiency Inches.....

Day of Week	PRODUCTION RECORD											WAGES		
	NEWS								ADV.		Daily Total			
	Regular	6 Point	Classified	Tabulated	Heads	Leads	Editorial	Initials	Mach.	Hand		Hours	Rate	Amount
Sunday														
Monday														
Tuesday														
Wednesday														
Thursday														
Friday														
Saturday														
TOTAL														

Fig. B

Quest for Improved Roller

By STAFF WRITER

Perfect universal roller has not yet been found—Increase in number of types of rollers is advantage to the user.

THE first Napoleon was making news and the London *Times* couldn't print the news fast enough on hand presses with buckskin ball inkers. Provincial pottery workers in England had been using a glue composition to transfer designs, as they still do. This composition was tried out on the first cylinder press built for the *Times* by Koenig & Bauer. It was a great improvement and letterpress was on its way.

At its best the oldest printer's roller of glue and glycerin still has no superior for tack and resiliency. Like paper, it is affected by atmospheric changes and these changes cause most difficulties in printing.

Installations of systems of atmospheric control must come in time. Meanwhile, manufacturers are developing substitutes for the glue roller which are not affected by atmospheric changes and printers continue trying to run paper flat through the presses in spite of static and extreme variations in humidity.

The non-meltable composition roller will not melt, absorb moisture or swell from absorbing ink. Under extreme dry heat it will shrink slightly. This, however, can be taken care of in setting. Probably the best method of setting is to turn the press until the ink plate is under the roller and the latter is out of contact with the vibrator. The sockets are lowered until the rollers rest on the plate when the sockets are raised until the rollers touch the stock. A slight turn up or down takes care of soft or hard rollers.

The press is turned so that the form rollers clear the ink plate and the form; then one end of each form roller is set lightly to vibrator; the other end is then set and finally the first end is set again. On rotary presses the rollers are first set to the plates and then to the vibrators, or as it is expressed in pressroom vernacular, "taking a picture" on the clean plates with the inked rollers.

It is better, always, to set the rollers lightly for a trial as most printing troubles caused by faulty setting are due to too tight a setting.

At the present time the glue and glycerin roller is most popular for the better grades of presswork.

Rubber Rollers

Rubber rollers have become most popular for use on the very fast presses used by the dailies of great circulation where continuous fast operation with freedom from forced stops and delay is as important as the high speed. The absorbent newspaper allows the use of a very soft, almost liquid ink which the rubber roller can carry. A special composition roller covered with moisture-proof sheeting and seamless cloth over the sheeting is preferred for ductor roller on presses using rubber rollers. Experiments with rubber rollers on other than newspaper presses have shown them to be useful on fast presses on absorbent papers with soft ink and they are being tried out on better grades of work with progress in meeting the different requirements reported.

Vulcanized Oil Rollers

A patented process of vulcanizing vegetable oils is employed by a manufacturer who makes (a) typographic rollers for use as distributor and ductor rollers; (b) process rollers for use as form as well as distributor rollers on letterpress machines; (c) lithographic rollers for use in any position on offset and lithographic presses; (d) water rollers for use with cover of molleton as dampening rollers on lithographic presses.

The typographic roller is a durable outer shell around a resilient core. It will not melt or change in size but becomes somewhat more firm when cold.

The process roller has a resilient vulcanized oil sleeve on its metal core. This sleeve is covered with a thin coating of rubber which is ground concentric. The rubber is finally covered with a composition. As this composition wears it may be washed off and a new layer applied which may be used in twelve hours or in even less time by using a special process.

Plant Rehabilitation Continues

Forecasters and analysts have stated that 1937 will be a splendid business year generally and that there will be a great demand for modern high-speed machinery.

From the standpoint of business received, the Miehle Printing Press & Manufacturing Company has just completed the best month in its history. The presses sold, both in numbers and in dollar volume during January surpassed any other month in the 46 years since incorporation of the company.

Printers and lithographers here and abroad apparently are realizing the necessity of rehabilitating their plants with modern, fast press equipment.

This is partially confirmed by the large number of press orders received by the Miehle Company during the first month of 1937, and continuing into February.

The lithographic roller may be had with either a grained or a smooth surface. It consists of a durable sleeve on a resilient core. Unlike the old lithographic rollers, these require no manipulation or breaking in and are delivered ready for use. All types of vulcanized oil rollers, because of being ground true, may be set lightly and wear is saved on the form or plate (litho) as well as the roller.

The water roller eliminates flannel, requires but a single layer of molleton and permits the use of less water.

The Synthetic Rubber Roller

This type of roller, which is superior to the rubber roller consists of resilient rubber base on the core over which is applied a sleeve of synthetic rubber. This compound can be processed so that it has the quantity of tack for the work on which it is used.

The synthetic rubber roller is used on all types of letterpress, lithographic and offset presses. It holds its shape and does not become sticky or chip off. It is claimed to resist the effects of ink and roller washes excellently and is little affected by extreme changes of temperature.

The roller industry at the present time might be said to be in a "state of flux" since it is reported that many

The International Convention

The swift up-curve in the membership graph of the Cleveland Club of Printing House Craftsmen touches a new high as a result of the enthusiastic work of Membership Chairman Don Crews, Promotion Chairman Jennings, their committees and the entire club membership. In August 1936, the club consisted of 76 members. Latest report is 125 members and still growing. This new all-time high spurs the Cleveland International Convention organization in its plans for the Eighteenth Annual Convention of the International Association of Printing House Craftsmen which will be held in Cleveland, August 8, 9, 10 and 11.

The general convention chairman and his thirteen committee chairmen received the final blessing of the International Board of Governors which met in Cleveland, February 27 and 28. The Board, headed by International President Clark Long of Washington, D. C., has approved the plans of the Educational and Program Committee as well as the outline for entertainment.

Cleveland, the Convention City, joins with the Cleveland Club in extending its invitation to all Craftsmen in the printing and allied trades of this country and Canada, as well as those of Europe, Australia and South Africa to attend the Cleveland Convention.

The Great Lakes Exposition offers many attractions for out-of-town visitors, with its forty-five acres of industrial and art exhibits and a midway of amusements.

Check your vacation period now—plan for the International Craftsmen's Convention—spend a week in Cleveland.

manufacturers are still testing and compounding various synthetic materials for certain types of duty.

Importance of the Roller

It has been stated repeatedly with little objection that the roller is more than half the battle in presswork. Hence the constant effort to produce better rollers is apparent. Stouter cores for larger rollers, ball-bearing sockets and ball-bearing cores, a core which is stationary while the composition on a metal sleeve revolves, cloth covered ductor and distributor rollers show the quest for better rollers.

In the long run, the supreme test of a roller is its ability to carry and distribute the ink. Just as the universal perfect ink has not been made so the perfect roller has not yet been produced because as the quality requirements increase speed handicaps the roller.

Excessive humidity handicaps the glue and glycerin roller in some locations. Some printers try out the various types of rollers until they find the type or combination of types of rollers which best answers the requirements of their plant. Thus a combination of rubber rollers with cloth covered rollers as ductors and distributors is popular on the fast presses of metropolitan dailies.

Some of the troubles with the glue and glycerin roller in the past were due to carelessness in manufacturing and shipping, in careless storage and haphazard setting, so the quest for a better roller is really for a fool-proof roller, which will always be of the same correct circumference, without high and low spots, pin holes, cuts, scratches or abrasions on the surface and which will never sag, melt or become waterlogged and which may be used when wanted without seasoning.

The various types of rollers other than the glue and glycerin require different care. This is all covered in instructions from the manufacturers and too much stress cannot be placed on the importance of carefully following these instructions since the initial cost of the rollers is greater than that of the older glue and glycerin roller.

There is no doubt that the increase in the number of types of rollers made is an advantage to the printer, lithographer, engraver, publisher and other users of printers' rollers. All have certain points of superiority and by adapting these to his own particular requirements the user profits.

The very serious trouble of composition rollers running down and melting on fast presses forced the use of a substitute which would allow continuous operation at high speeds for the reason that if there is no time to spare no time may be lost. If the enormous loss of time caused by frequent setting of rollers that change in size and the extremely difficult problem of getting waterlogged rollers to print in locations where excessive humidity is common is realized, then this loss also requires a substitute for the older type of roller. Speed is the order of the day. Hence, the quest for fool-proof and humidity-proof printers' rollers.

ROLLER MAKERS MEET

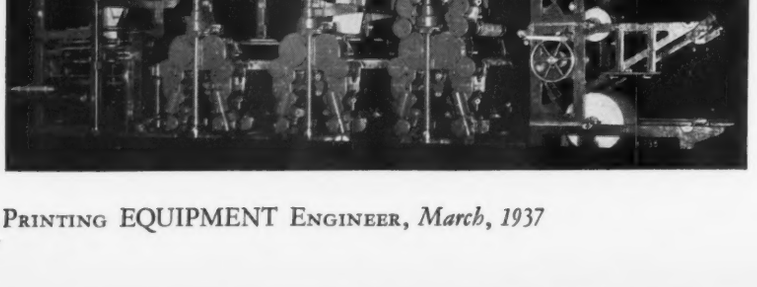
The 20th annual meeting of the National Association of Printers Roller Manufacturers was held, as usual, at the Commodore Hotel in New York City on Monday and Tuesday, February 8 and 9. Representatives of roller making concerns from various parts of the country were in attendance.

The officers of the Association are Frank Stevens, jr., of Wild & Stevens, Inc., Boston, Mass., president; Robert Wortman of Wortman Roller Company, Cincinnat, O., vice-president; William P. Squibb of Godfrey Roller Company, Philadelphia, Pa., secretary, and Charles Hadley of the O. J. Maigne Company, New York, treasurer. Officers were re-elected to serve for the ensuing year.

The meeting was not open to the public but was open to all those engaged in the industry, whether members of the Association or not.

BANTAM CHANGES NAME

The Bantam Ball Bearing Company of South Bend, Indiana, has changed its name to more clearly describe its present day production. The new name is the Bantam Bearings Corporation, which is now a subsidiary of The Torrington Company of Torrington, Conn.



Rapid increase in business necessitated changing from flat-bed printing to high-speed rotary printing in the plant of the Kansas Color Press at Lawrence, Kas. In 1931, Warren Zimmerman was using a flat-bed press in Liberal, Kas., during which time Mr. Zimmerman began expanding his business. In 1935 the Kansas Color Press was moved to Lawrence, Kas., in order to locate the plant near railroad facilities to expedite the handling of large quantities of circular work contracted for.

It has been announced by Warren Zimmerman of the Kansas Color Press, Lawrence, Kas., that a new 12-page Duplex Unitubular Press has been installed in the Color Press plant. The press consists of three units and a quarter-page folder. One of the units is equipped with a double color cylinder.

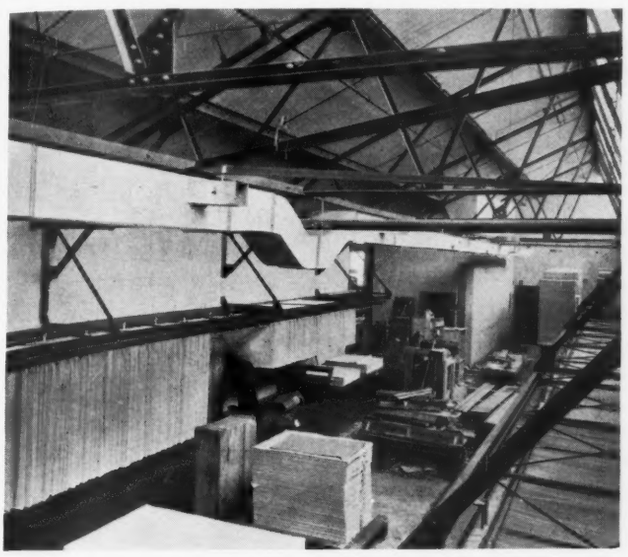
Air Conditioning and the Printer

By J. F. SPRINGER*

Mechanical executive is at mercy of moisture in paper stock and wood blocks in trying to obtain maximum production results.

II.

AIR conditioning is a very general term, used by some to mean one thing, and by others to mean something else. There is comfort air conditioning, which signifies—or should signify—just what it says. But even here, misunderstanding may occur, for the reason that one person may have his mind on summertime, and another may be thinking of winter. Again, there is industrial air conditioning, and included in it process air conditioning. In the printing business, just about all of these meanings may have to be considered at one time or another.



Paper storage room in the plant of the Latham Litho Company, Long Island City, New York. Here the conditioned air is brought in by the long duct seen near the roof—at the left. The paper suspended in the rack is being conditioned. Equipment by The Cooling & Air Conditioning Corporation.

Furthermore, almost any form of air conditioning may be installed in part. For example, it may handle only the cooling of the air, or only the humidity. Or, even only part of the matter of humidity. It is quite desirable to have clear ideas in this whole matter of air conditioning. Otherwise, a printing concern might contract loosely for a certain thing, only to find later on that part of what its executives supposed was going to be covered has been omitted. An example or two may serve to assist us in getting our minds alert to the importance of knowing just what may actually be meant by this term and that one.

The Waverly Press in Baltimore is engaged in the publication of books, some or all of which are illustrated with engravings. Quite a few years ago, they put in air conditioning in a general way. But the installation did not take care of the matter of humidity to the extent of regulating the height of the cherry wood blocks on which engravings were mounted. At one time, the blocks would thicken, at another, they would get thinner. All on account of changes in the moisture condition of the atmosphere. What they needed especially was an adequate means of getting water out of the air—that is, a real husky means of drying the atmosphere. So, they supplemented their air conditioning plant by installing special equipment for the purpose of de-humidifying the air.

Thomas & Company, New York, New York, who do a great deal of letter press printing, including color work up to five colors, put in quite a few years ago a humidifying system. When this equipment was in operating order, company executives found no trouble in adding moisture to the air and in just the right amount to control the water content of the paper on which printing was being done. And this installation operated automatically, responding of itself to weather variations in humidity. But, if it was desirable to take moisture out of the air, thus giving it a greater drying power, it could not be done.

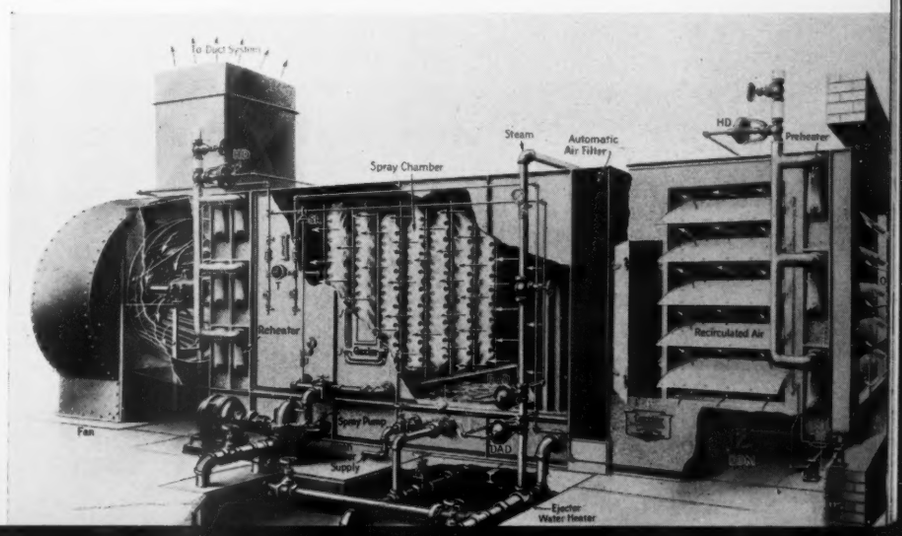
These examples serve to bring us to the matter of the complete, as opposed to partial, control of humidity. Let us consider it.

Complete Control of Humidity in Printing Plants

The printer does his work in an atmosphere containing more or less water. The stock upon which he prints also contains water impregnated in it. The wooden blocks upon which his halftones and other engravings are mounted likewise have a water content. Except when there happens to be a state of equilibrium between the atmosphere, on the one hand, and the paper and the wood on the other hand, the air will continually be giving moisture to the paper or the wood, or else it will continually be absorbing moisture from the stock or the wooden block. If these additions and subtractions produced no effect at all, or at least no effect having to do

(*Continued on Page 55*)

Well indexed "open" illustration of an elaborate air-conditioning central plant to be set up at some convenient point from which it distributes the conditioned air to rooms where wanted. The illustration shows the spray chamber, the automatically controlled air dampers, the heaters, the auxiliary air filters and the centrifugal fan which delivers the conditioned air to the duct system. Installed by Carrier.



*New York, New York.

New Printing Equipment and Supplies

New Photoengraving Development

From the beginning of engraving by acid erosion on metals, it has been necessary for the engraver to apply to the back of the metal sheet and subsequently remove a coating as a protection against acid erosion. This requires the use of materials such as asphaltum as a resist and benzol as solvent. To eliminate the necessity for coating the back of zinc sheets used in photoengraving, a method of applying a metallic coating at the time of manufacture has been developed at the Atlantic Zinc Works. It is stated the metalic coating, which is impervious to the action of nitric acid, adds nothing to the thickness of the finished plate.

Plates so protected will be marketed by the Atlantic Zinz Works under the trade mark "Backote" which will be stamped on the wrapper and back of each sheet so processed. No special instructions are necessary in using these sheets. Etching is done on the sheet as received from the manufacturer without applying any resist.

Manufacturer claims the metallic "Backote" is a heat conductor and will reduce the time of each burning-in of dragon's blood or ink on the engraving; from three to six minutes are saved, according to the size of the zinc flat, and the finished engraving will have a clean and even back without lumps of undissolved resist or etched spots where the acid may have penetrated an uneven coating.

P-Double-E File No. 2E12.3.

Silent Steel Gears on Kelly Presses

Gear noise and vibration, it is said, have been eliminated from the Kelly Press. The engineering department of American Type Founders has centered attention on the elimination of noise in press operation. This has been achieved through the installation of Waldron Silent Steel Gears. Constructed of laminated steel sheets, these gears, it is claimed, provide long life and at the same time assure quiet operation. Because tooth profile does not reform, more rolling action is available, hence less rubbing and wear. Sturdy construction eliminates tooth breakage as loading is normal to the steel laminations.

Benjamin "Beam-Director" Attachment

A new accessory for lighting fixtures makes it possible to convert existing reflectors of the overhead lighting system into supplementary lighting units. Benjamin "Beam-Directors" consist of auxiliary projectors of etched Alzak aluminum for attachment inside the skirt of Benjamin RLM Dome reflectors. They are recommended for building up illumination over areas 30 to 36 in. diameter on machines or work benches located within 10 or 12 ft. of the reflector to which they are attached. Under these conditions, they are capable of adding 10 to 15 footcandles more illumination. They are particularly effective in directing additional illumination onto shaded surfaces of machines or work benches to eliminate shadows cast by overhanging sections or other obstructions, and to direct the beam of light nearly straight down from the reflector or into higher angles to reach more distant objects. In no case, however, is it possible to swing the beam high enough to cause glare in the eyes of other workers.

Beam-Director attachment can be used to illuminate particular spots.

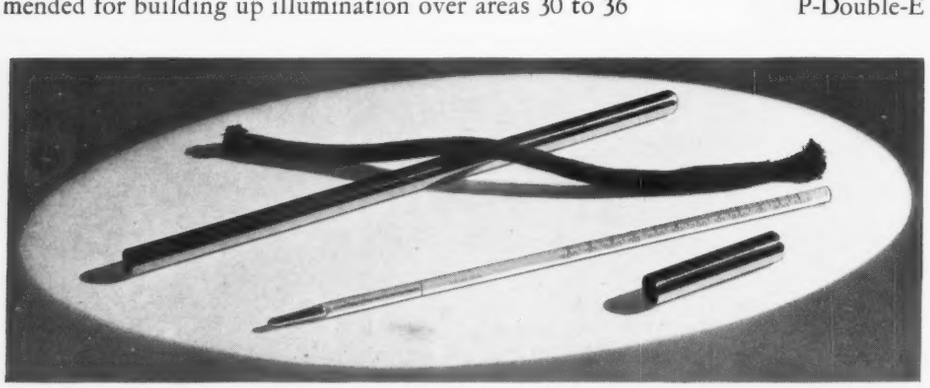
P-Double-E File No. 1GG.

Quick Reading Thermometer

A sensitive glass mercury thermometer for taking the temperature of any type metals while in the molten state provides a means for obtaining an almost instant reading since the glass bulb of the instrument is immersed directly into the metal. The thermometer is particularly useful in checking the correct adjustment of portable and stationary pyrometers. Sometimes these instruments are made in such a way as to indicate plus or minus degree readings from normal, and the variation from normal may be determined by comparing the reading with the thermometer shown in the illustration.

The thermometer is encased in a metallic nickel-plated tube with cap and fabric stocking for protective purposes when not in use. The mercury column and figures magnify for easy reading. Further information may be obtained from Imperial Type Metal Company direct or through *Printing* Equipment *Engineer*.

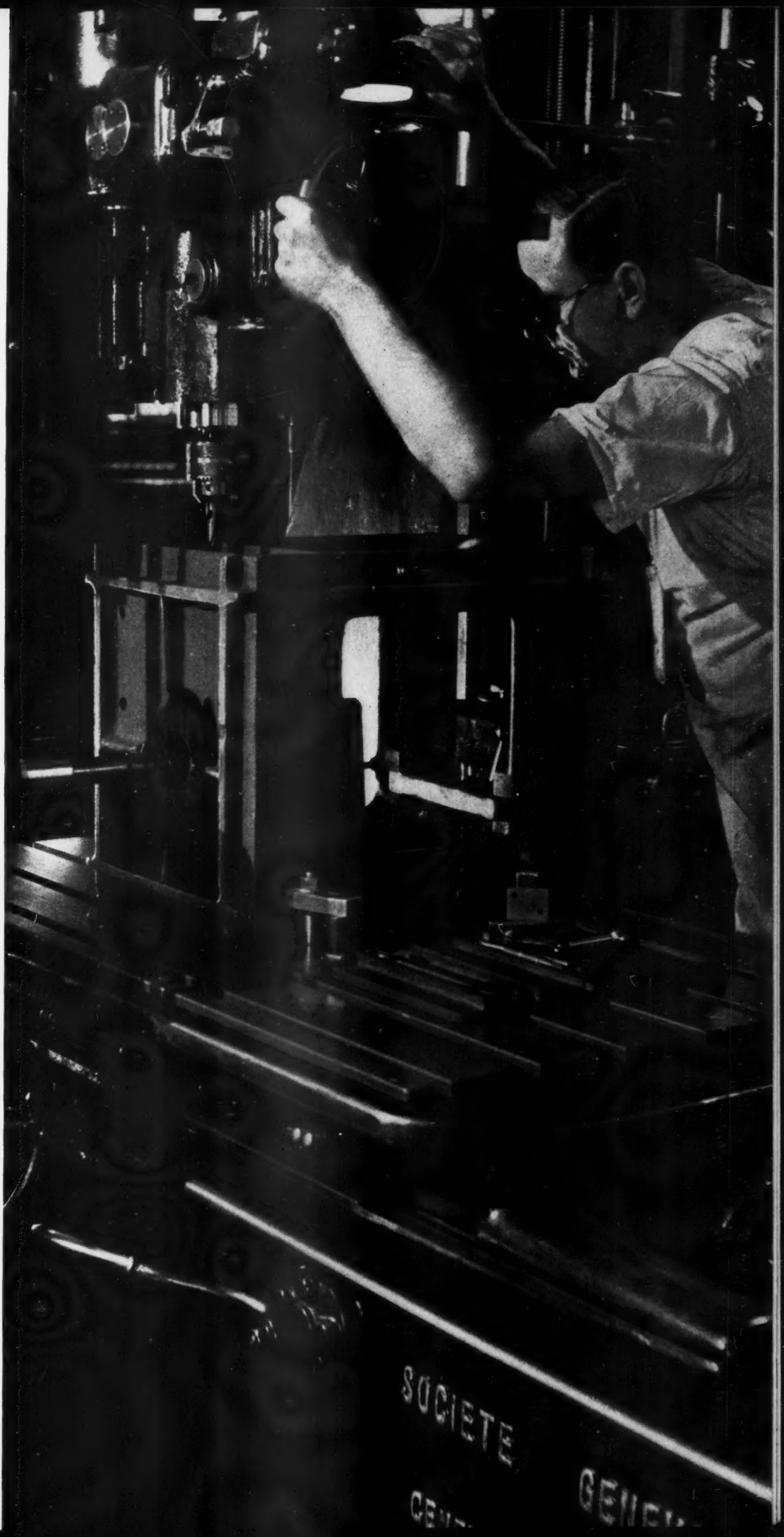
P-Double-E File Nos. 1BB and 2G22.



When this sensitive, quick-reading thermometer is to be used, the bulb is plunged directly into the molten metal up to the guide ring shown at the lower end of the tube in the illustration. The thermometer is encased when not in use in a protective fabric stocking and placed in the metallic tube. The tube with cap in place can be stored in a ½ in. by 12 in. space.

Herbert Matter

LINOTYPE



BUILT RIGHT
TO WORK RIGHT

This Swiss jig borer is designed to perform the infinitely fine precision work on jigs used in the manufacture of Linotype parts. No expense is spared in securing the most accurate machines made in the world. The accuracy of this machine can be measured not by thousandths, but by ten-thousandths of an inch, horizontally and vertically.

MERGENTHALER LINOTYPE COMPANY

BROOKLYN, NEW YORK

14 P-L FRANKLIN GOTHIC EXTRA CONDENSED, LINOTYPE GOTHIC NO. 13 AND BOOKMAN

Tabloid By Offset

By STAFF WRITER

Mt. Vernon (N. Y.) News containing numerous local illustrations printed on web perfecting press which is reported to deliver 20,000 copies per hour

WHAT is called the "Demonstration Edition" of the Mt. Vernon (N. Y.) *News* was published in 16-page tabloid form on Friday, January 22. The entire edition was printed from plates made by the planograph process on an offset web perfecting press which is said to operate at the rate of 20,000 copies per hour. The *News* is said to be one of several weekly publications in smaller communities at present being printed by offset. In the case of the Demonstration Edition, the plates were made by John S. Swift Company, New York, N. Y Page size is 11¼ in. by 17⅛ in. Front page form area (expressed in picas) is approximately 61 ems by 96 ems.

Most of the body matter copy was typed on a variable spacing typewriter with device which permits "justifying" the typed matter to column width. Advertising typography, display heads and a portion of the body matter was accomplished via the well-known type proof reproduction method.

The pictorial reproduction is excellent. Approximately 7 of the 16 pages are given over to halftone reproductions. From a typographical standpoint, however, the substitution of typewriter straight matter "composition" for letterpress proofs shows disadvantageously by comparison with the quality of the illustrations.

Publisher Christian F. Burckel, in speaking of a future printing method for his publication, announced that the Mt. Vernon *News* is planning its order for a three-unit press which will deliver 24-page folded products ready for delivery.

John B. Webendorfer, President of Webendorfer-Wills Co., Inc., stated this particular type of offset web perfecting press is built upon the unit plan with optional folder, magazine folder, flat sheet delivery and other special attachments. He stated also that present planographic plate-making methods make it possible to obtain from 100,000 to 200,000 impressions per plate.

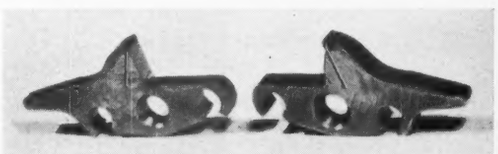
The halftone illustrations consist of buildings, city officials, local manufacturing, Chamber of Commerce exhibits and school faculty. In the opinion of Mr. Webendorfer a small offset press of the web type can be adapted to the printing of picture newspapers, either weekly or semi-weekly, in the smaller communities.

"For some time there has been a definite trend toward pictures in newspapers in small cities," said Mr. Webendorfer. "Suitable equipment for printing liberal quantities of pictures is available. Equipped with a Leica or similar camera, informal local-interest pictures can be taken at reasonable cost. In addition to the subjects mentioned above, local interest can be maintained by publishing pictures of Rotary, Lions, Women's and Rural Clubs; churches and church congregations and lodges. Full pages of newsy pictures can be made to stir up reader interest since nearly everyone is picture-conscious at the present time. While the pictorial sheet could hardly be expected to supplant the conventional newspaper, I am convinced it would make a place for itself in practically any community."

This illustration shows the front page of a 16-page tabloid edition of the Mt. Vernon (N. Y.) *News*. This issue was printed from plates made by the planograph process on an offset web perfecting press at a rate of 20,000 copies per hour.

Bearing Point for Verges

In the plant of the Boston Herald-Traveler, *James F. Hubbard, Chief Composing Room Machinist, has slotted the magazine escapement verges for line-casting machines which are operated at least two shifts per day. The verge is slotted and a section of spring steel (clock spring) inserted at the point where the escapement lever plunger contacts the verge.*



According to Mr. Hubbard, this arrangement eliminates all "digging in" of the escapement plunger and increases the useful life of the verge greatly.

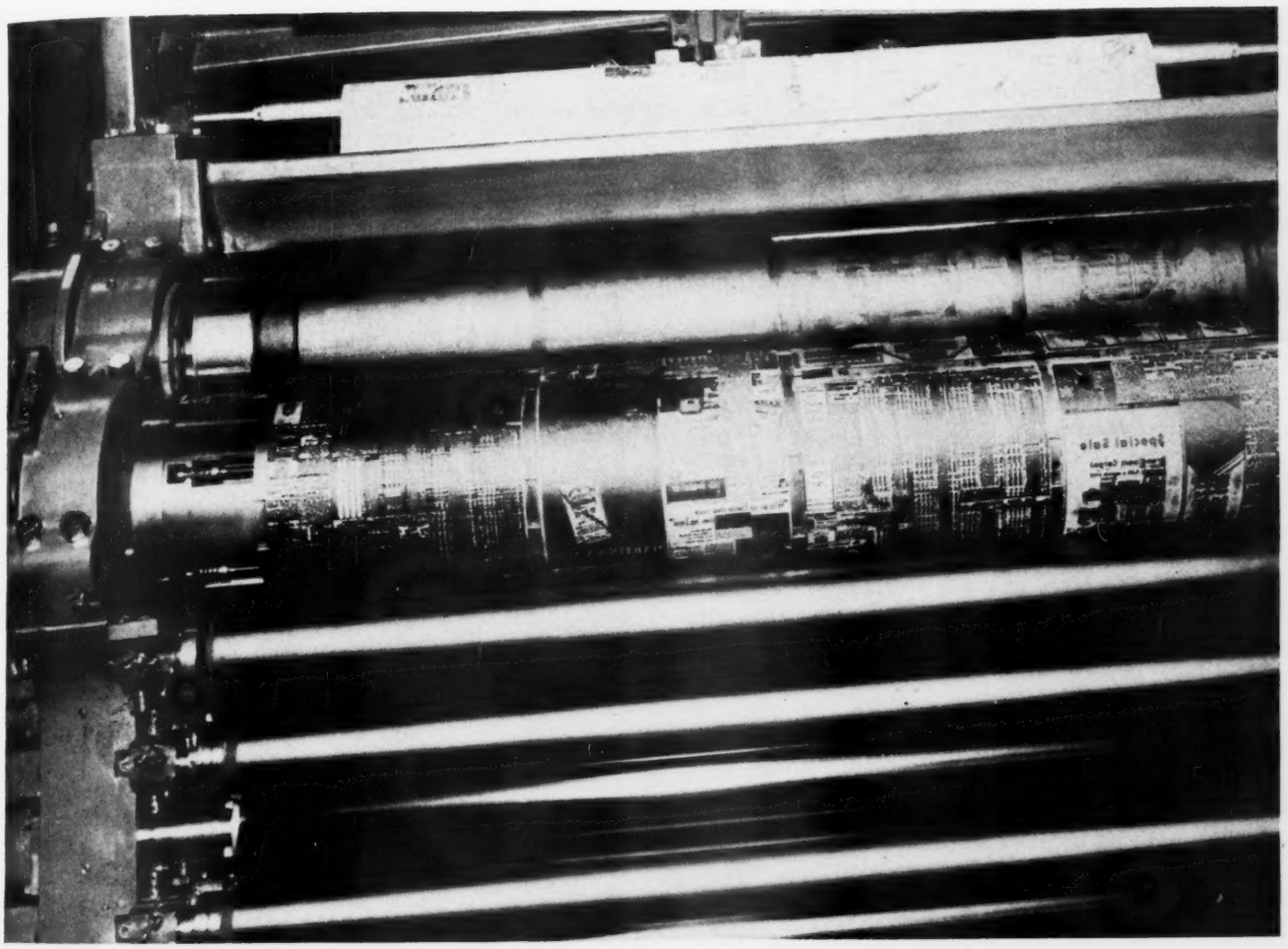
The slitting is done with a thin steel screw-slotting cutter mounted on an arbor and placed between centers on a lathe. A jig for holding each verge to be slotted is fastened to the lathe tool carriage and the cross-feed used to feed the work into the cutter. The cutter used is 0.002 in. thinner than the steel spring stock which is pressed into the slot.

P.S.—Use carbon tetrachloride, Carbona or high grade type wash to clean magazines with a hand brush. Gasoline and alcohol are not suitable for the purpose.

DU PONT
REG. U. S. PAT. OFF

NEOPRENE

FOR HIGH QUALITY ROLLERS



LONGER LIFE—LESS GRINDING—BETTER PRINTING

THE superior durability of this new material is now widely recognized by the printing industry. Rollers made of NEOPRENE have established new standards of performance and economy in letterpress, offset, lithography, and color-printing. They have all the advantages of rubber rollers ***plus*** a remarkable resistance to inks and washes.

Enthusiastic printers report uniform printing, long service life, less grinding, and lower replacement cost with NEOPRENE rollers. Swelling is practically negligible, and high speeds are possible without sacrificing the quality of the printing.

Ask your regular supplier for NEOPRENE *rollers, or write us for a list of manufacturers.*

Try
NEOPRENE
Formerly sold under the Trade Mark "DuPrene."
where other materials fail

RUBBER CHEMICALS DIVISION, E. I. DU PONT DE NEMOURS & CO., INC., WILMINGTON, DELAWARE

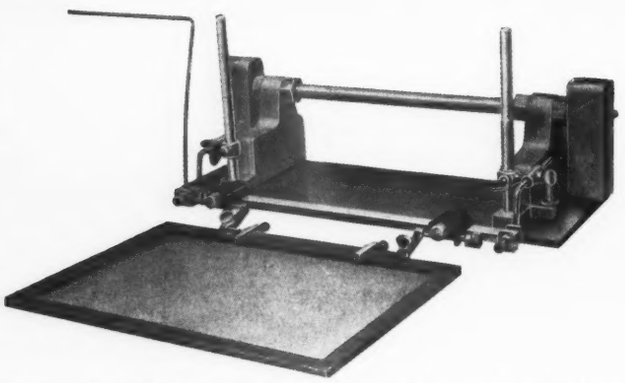


Fig. 11—One kind of portable shading machine used in obtaining mechanical shading.

What Is It?—V

By ADAM HENRY REISER*

Lithographic engraver also can create planographic image on stone or metal.

LAST issue we developed the method of engraving, one of the first steps in creating a lithographic image. An intaglio image is produced by the lithographic engraver by hand on lithographic stone only. But the lithographic engraver can also create a planographic image on the lithographic surface, be it stone or metal. He can produce this by hand. This is true whether it be lettering or art work although in the latter case, another specialist, called a lithographic artist is engaged. Since this will give a logical sequence to the articles on methods, we shall discuss this means of work, leaving the camera application for the next issue.

Tusche and Crayon Work

Figure 5 on page 22 of the February (1936) issue of *Printing* Equipment *Engineer* depicts a planographic image on a smoothly polished stone. Were the image to appear on a metal surface, either zinc or aluminum, that surface would have to be pictured as being grained (shown in the July, 1936, issue, Figure 7, page 20).

Work may be drawn direct on either surface, one type being better fitted to receive certain kinds of work than the other. The polished stone, for illustration, will more faithfully reproduce very small, fine lettering because of its unbroken surface than could possibly be expected of the same work drawn to a grained surface. This is so, whether the work be drawn by the mechanic with a fine brush or pen.

On the other hand, when crayon work is attempted the surface to which the work is to be drawn must certainly have a fine tooth or grain. This can be understood more readily when it is realized that the medium used in this drawing is the lithographic crayon. This is drawn over the surface, which, when perfectly flat, leaves a solid smudge. However, when the surface has a tooth or a grain such as depicted by Figure 7, the peaks will catch the greasy crayon as it passes over them. This will result in a tint or texture, the smoothness or roughness of which is controlled by the grain. The coarse grains used in poster work resulting in rough, coarse tints, while the grains used in smaller work are much finer and thus yield finer tints. Fig. 13 shows a crayon tint on an aluminum plate.

Tusche used in this hand work is composed of almost similar ingredients to those used in the production of crayon. Wax, soap, shellac, tallow and lampblack is used in varying proportions. The crayon as is supplied to the artist is about ¼ in. square by about 2½ in. long, while the tusche comes in sticks ¼ in. thick by 1 in. wide by about 5 in. long. The crayon is used in stick form, put into a holder and sharpened to the desired point. Or it may be used flat to get broad tints. The tusche stick is rubbed into a saucer until a layer is deposited on the bottom. A few drops of water are then added and the deposit in the plate is rubbed down with the water until the whole becomes a black, workable fluid resembling ink. This is then worked with either a brush or pen.

Layout and Steps

To lay out the work properly, a tracing is used just as in engraving. After the cuts in the tracing are dusted with either red or blue powder, the tracing is rubbed face down to the clean surface, either stone or plate. The surface must be grease receptive and is therefore not powdered as in engraving. While the surface is made grease repellent in engraving before the start by an etch with gum arabic and nitric, in tusche or crayon

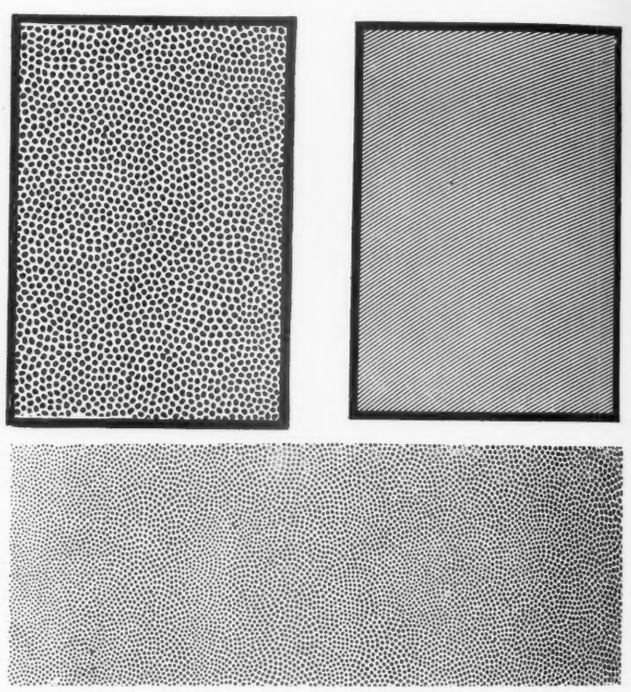


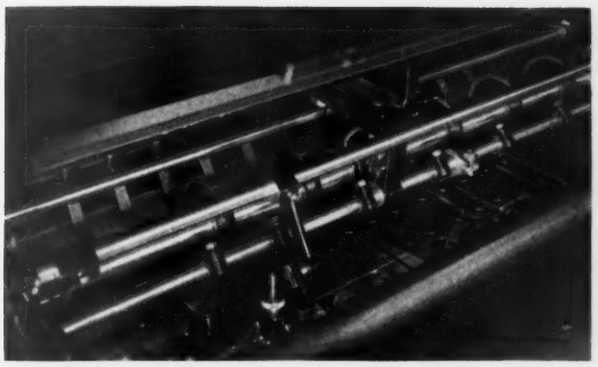
Fig. 12—A few of the Ben Day dot and line arrangements which may be by the aid of the machine method of transfer from sheet to stone or plate.

work, we work directly upon the surface. This must therefore be grease receptive. In engraving, the cuts below the surface are made grease receptive with oil applied after the cut. In tusche or crayon work, both materials supply the grease to the image on the surface.

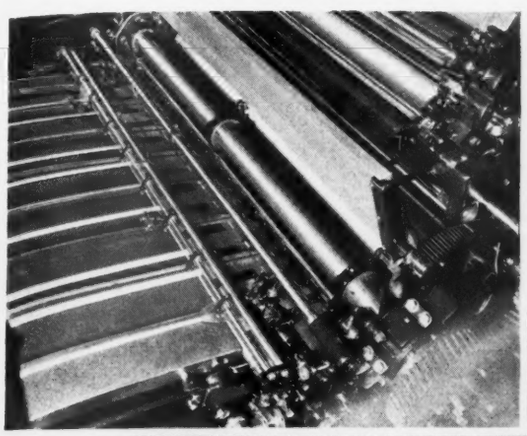
After the tracing is down, lettering and lines are drawn in with ruling pen, pen or brush and tusche. Solids are filled in with a brush and stippling in order that arrangement of dots to represent shading etc., may be worked by hand with a pen and tusche. After that, sections are gummed out that are to be free of tints or further work. Crayon tints or mechanical shading are then put to the

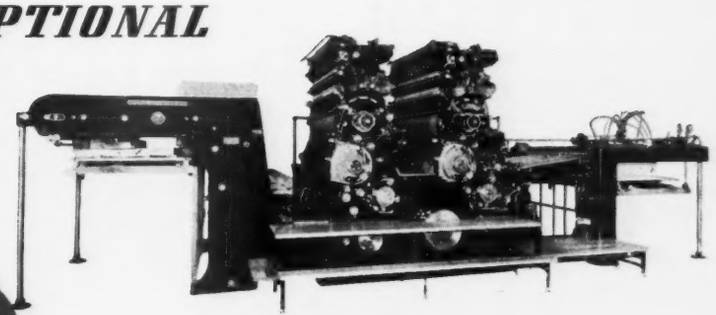
(*Continued on Page 57*)

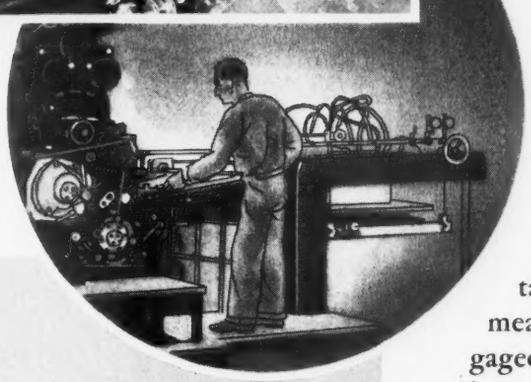
Harris



FEED ROLL OR ROTARY THREE POINT REGISTERING MECHANISM OPTIONAL







• An exclusive Harris Feature is the Feed Roll Mechanism that has gained wide recognition and acceptance in fine register work.

The progress of the sheet is interrupted by multiple front stops. Where the sheet is side registered by means of a pull side guide. This side guide contains a multiple sheet detector or choke. Then by means of upper and lower feed rolls, the sheet is engaged at rest, and advanced to multiple gauges on the impression cylinder.

Front register therefore takes place on the impression cylinder and not at the front guides. This eliminates many front registration hazards, and also makes possible control of rear edge sheet stretch.

Rotary three point registering mechanism coupled with stream feeding and pull side guide is also available for concerns preferring this method of sheet registration.

The press illustrated is the LSK, 42 x 58, two color

Some Features of HARRIS COLOR GROUP

1. Revolutionary Harris H.T.B. Stream Feeder
2. Precision Tapered Pre-Loaded Roller Bearings
3. Choice of Feed Roll or Rotary 3 Point Registering mechanism
4. Micrometer Dials for setting Printing pressures
5. Quick Change Plate Clamps
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8. Harris Cleanable Ink Fountain
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YOU CANNOT AFFORD TO OVERLOOK PAASCHE'S "NO OFFSET" EXPERIENCE

● WHEN you buy equipment to eliminate offsetting and smudging you receive the experience and service of the manufacturer as well as the product itself.

Because the Paasche Airbrush Company invented the first "No-Offset" Equipment, and for several years was alone in pioneering this field, it is not surprising that the latest Paasche Units reflect in their simplicity of operation and ease of control the extra years of experience that only Paasche Engineers have enjoyed.

The air operated head is equipped with indexed air and fluid controls thus insuring the use of a minimum amount of solution and the proper volume and pressure of air for effective "No-Offset" treatment of every printed sheet regardless of size or press speed.

Dry air is essential for successful "No-Offset" treatment. Paasche Air Conditioners, specially designed to supply dry air free of dirt, oil, rust, and other harmful foreign matter, have proved their superiority in repeated comparative tests.

Whether you operate one mechanically fed platen, a battery of multicolor rotaries—letter-press, offset or gravure equipment, there is a Paasche "No-Offset" Unit best suited to your requirements.

Write us today for complete engineering details and performance data. Without obligation, of course.

Art Studio Equipment

Largest Manufacturers of Artists' Airbrushes and Airequipment for the Designer, Portrait Artist, Illustrator, Retoucher and Engraver. Send for descriptive Art Bulletin L3-36.

Paasche Airbrush Co.

1931 Diversey Parkway, Chicago, Ill.

Editorial

Production Dept. Representation

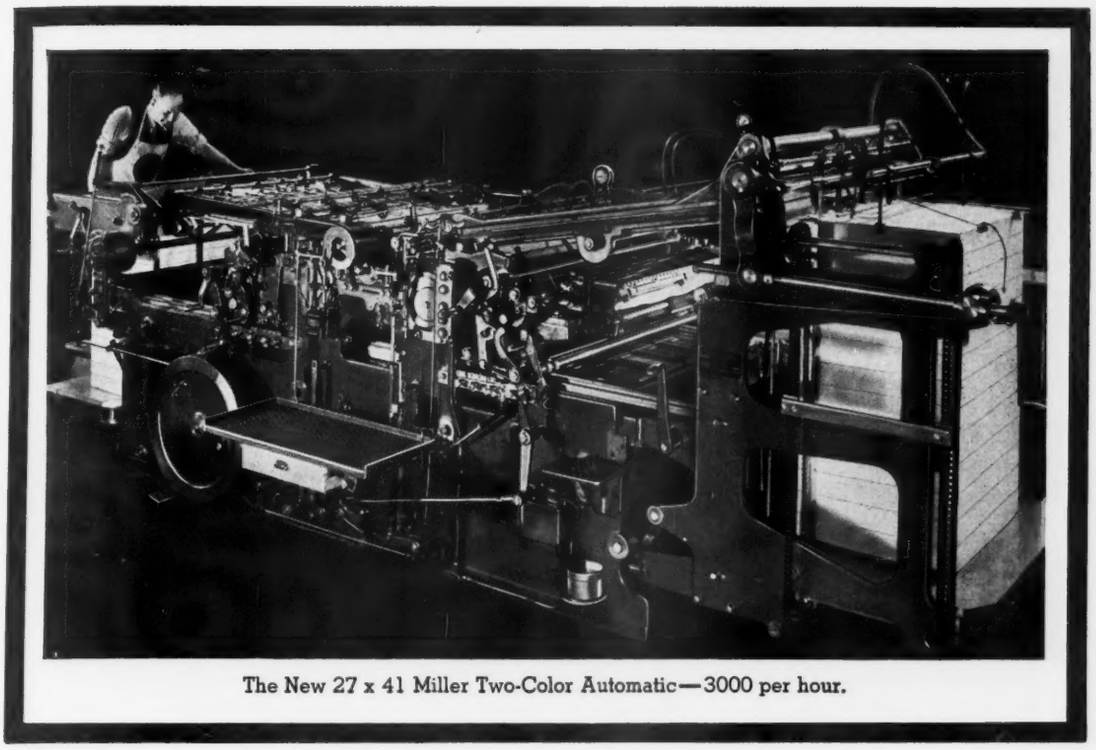
PRODUCTION representatives generally should be pleased that Joseph F. Pezdirtz, production manager and member of a labor union, has been elected to the Board of Directors of The Register and Tribune Company in Des Moines. In commenting upon the selection of Mr. Pezdirtz to the Board of Directors, Gardner Cowles, sr., president of the company, stated:

> The election of Joseph F. Pezdirtz to the Board of Directors of The Register and Tribune Company is recognition by the stockholders that as an individual his straight-forward, clear-thinking, intelligent approach to the problems of employer-employe relations have in the past aided the management of The Register and Tribune Company to foster and maintain the friendly spirit of good will in our relations with members of our trade unions.
>
> Mr. Pezdirtz's election was also formal recognition of the mechanical departments as an essential function in the publication of our newspapers.

It is the opinion of *Printing* Equipment *Engineer* that this is an example which could well be followed by other metropolitan newspapers who do not now have

Joseph F. Pezdirtz is now a member of the Board of Directors, Des Moines *Register* and *Times*.

a similar linkage between the executive and production departments. When printing and publishing organizations have grown to goodly size, the valuable personal relationship between management and production is apt to become dissipated. What better solution to the problem could be found than to delegate that task to some production executive capable of representing the production departments in a sympathetic manner? Such a linkage works two ways for the company. Through this representative, the company can be kept informed of the problems of the personnel and production departments which grow in importance with plant growth. This growth, in justice, makes it imperative that someone from the mechanical departments keep management conscious of their needs. Wise business executives recognize this and we are glad to note Mr. Pezdirtz's preferment.



The New 27 x 41 Miller Two-Color Automatic—3000 per hour.

MORE "PROOF OF THE PUDDING"

Four short years ago in the midst of depression, the MODERN MILLER AUTOMATIC CYLINDERS made their bow to the trade.

Today no finer certificate of merit can be offered than the names of their many users throughout the world.

The following one dozen examples are chosen from recent prominent multiple installations:

Ann Arbor Press, Ann Arbor, Michigan.....5 Presses
Cadillac Printing Co., Detroit, Michigan.....6 Presses
Case-Hoyt Corp., Rochester, N. Y.....4 Presses
Diamond Match Co., Barberton and Springfield.....9 Presses
R. R. Donnelley & Sons Co., Chicago and Crawfordsville.....4 Presses
Eddy Press Corporation, Pittsburgh, Pennsylvania.....4 Presses
Oxford-Print, Boston, Massachusetts.....4 Presses
Pace Press, Inc., New York, New York.....4 Presses
A. H. Pugh Printing Co., Cincinnati, Ohio.....5 Presses
Read Printing Company, New York, New York.....8 Presses
J. R. Watkins Company, Winona, Minnesota.....5 Presses
F. Weidner Printing & Publishing Co., Inc., Brooklyn, N. Y.....4 Presses

CATALOG AND FULL PARTICULARS GLADLY TO ANY RESPONSIBLE FIRM

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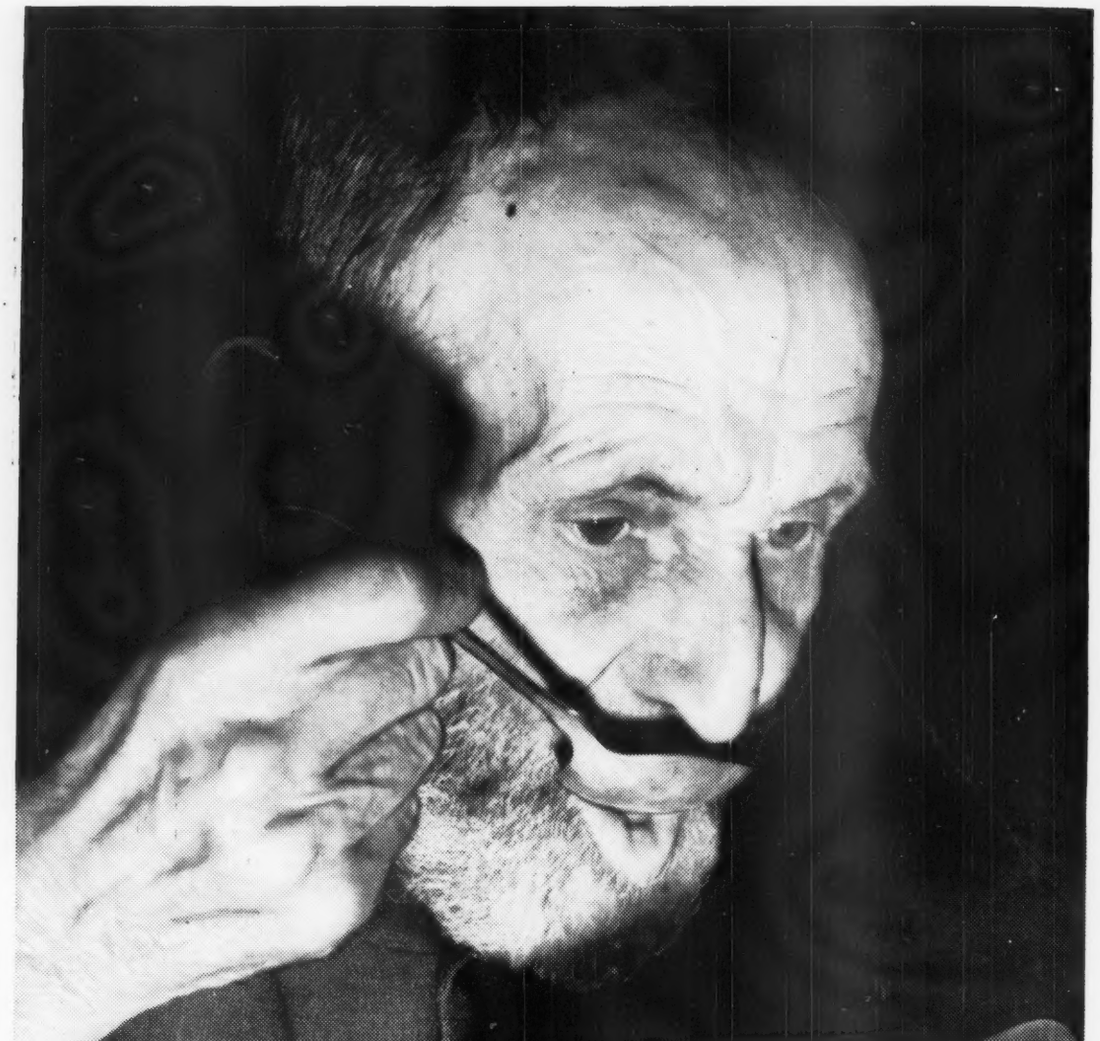
MILLER PRINTING MACHINERY CO.

PITTSBURGH, PENNSYLVANIA

Branch Offices: Boston, New York, Philadelphia, Chicago and San Francisco. *Canadian Company:* Miller Printing Machinery of Canada, Ltd., Toronto and Montreal. *Agents:* California Printers Supply Company, Los Angeles, California; Lance Company Printer's Supplies, Dallas, Texas; J. H. Schroeter & Bro., Inc., Atlanta, Georgia

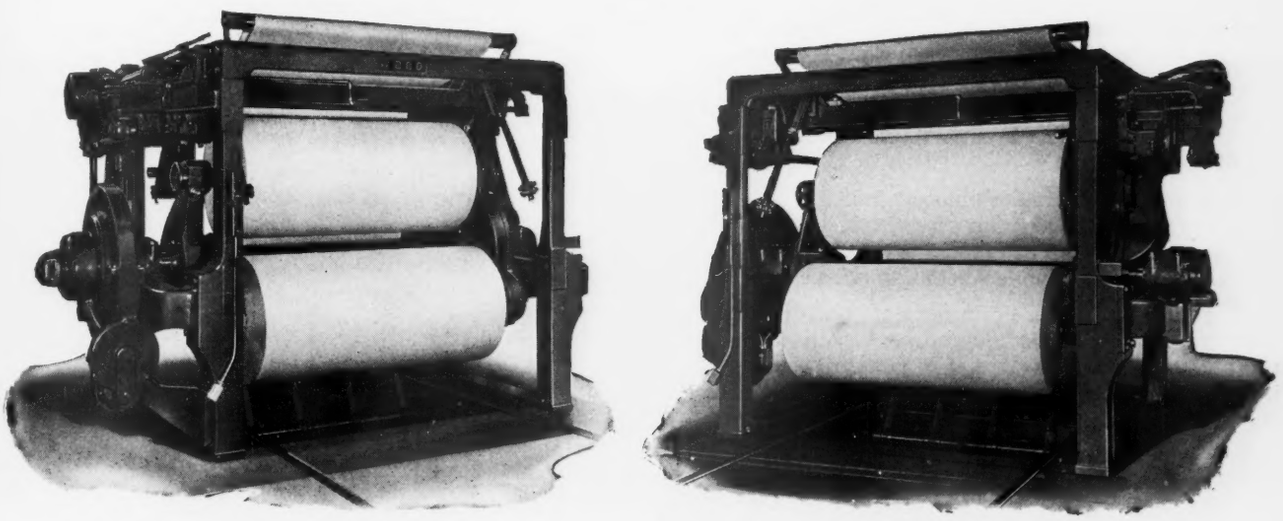


Example of contrasty halftone engraving which is particularly suitable for newspaper reproduction. It appeared in a recent issue of the Cleveland "News." A slight amount of "art" was done on the print before it was sent to the engraving department. Perhaps, because this illustration is not printed on newsprint some of its real value as a newspaper engraving is lost.

Earle Martin, Production Manager of the Cleveland "Plain Dealer" and "News" has investigated newspaper engraving for a considerable period of time and the halftone printing in the "News" is consistently excellent. Mr. Martin, with the collaboration of Engraver Otto Lange, Stereotype Superintendent Blanchard Wilson and Pressroom Foreman W. J. Morrison, has developed a technique which produces a b o v e - t h e - a v e r a g e newspaper reproduction. A 75-line cross-ruled screen was used for this subject. All "News" engravings are made with Eastman transparent base film. A dark room camera forms part of the equipment.

THE AUTOPASTER—

. . . . is History's First Automatic Device for Replenishing the Paper-Rolls of Web Printing Presses While Running at Full Speed



The Autopaster and Autoreel are here shown combined in a single mechanism, but the Autopaster may be applied to any other make of paper reel.

EIGHT of these machines feed the presses which print the New York City Telephone Directory, in the plant of the Jersey City Printing Company.

Telephone directory paper is costly; the Autopaster and Autoreel combination greatly reduces its waste in printing.

Telephone directories have extremely narrow margins—a fact which requires exact registration, lest their pages bleed in trimming. The Autopaster-Autoreel combination insures the maintenance of the necessary registration.

Telephone directories must be printed with great clarity, and an unvarying appearance. The Autopaster-Autoreel combination insures this, by enabling the presses which print them to maintain unvarying speed.

All of these advantages will accrue also to the newspaper which employs the Autopaster.

OOD NEWSPAPER MACHINERY CORPORATION

AINFIELD, NEW JERSEY ※ NEW YORK OFFICE: 501 FIFTH AVENUE

Flood Emergency

By STAFF WRITER

Ohio river flood conditions call for emergency measures by printing plants and suppliers.

FORTUNATELY, the Ohio river flood in the neighborhood of Cincinnati and Louisville was not so great as to cause serious damage to the larger printing plants nor to suppliers to the printing industry situated in the flood area. Last month, *Printing* EQUIPMENT *Engineer* carried an account by G. W. Kaufmann, Presidcnt of Rapid Electrotype Company, who described the shutting down and transfer of work and personnel to the company's Detroit plant. T. A. Corcoran, Purchasing Agent of the Louisville *Courier-Journal*, and H.T. Simpson, President of Printing Machinery Company, Cincinnati, describe below how the emergency was met by executives of their respective companies.

Mr. Corcoran states: "I live across the river in New Albany, Ind., and left the plant at 3:00 o'clock Sunday morning January 24, which was the last day we were able to publish in our plant. For nine days I was marooned and was unable to contact the plant.

"We did not have a great deal of reconditioning, as we were one of the few plants in the central section of the city that was not flooded. We had a little water in the basement, which we were able to pump out before it did any real damage.

"We have a color press with the motor in a pit underneath. This motor was damaged and we are having it reconditioned. We lost a few underground cables from our motor generators to the switchboard.

"We were unable to publish in our building for twelve days because of lack of power. During this period we published a combined paper for two days at Shelbyville, Ky., using the facilities of two weekly papers there, the Shelby *Sentinel* and the Shelby *News*. We were able to get out only 5000 copies of each of these issues. We then moved to the plant of the Lexington *Leader* at Lexington, Ky., and published there for ten days.

"The personnel of our radio station, WHAS, had a real battle to keep on the air and were successful with the exception of four hours. Broadcasting was maintained twenty-four hours a day during the emergency, sending flood bulletins to boats, radio-equipped cars, and to relief stations located throughout the flooded districts."

H. T. Simpson, President, stated that the plant of The Printing Machinery Company at 436 Commercial Square, was located safely outside the flooded section of Cincinnati. The curtailment of water and power and the inability of a number of employees who were marooned in their homes to reach the plant necessitated suspension of operations. However, in spite of the fact that during the emergency holiday the plant of The Printing Machinery Company could not be supplied with heat, the employees in the Inspection and Shipping Departments and the offices insisted upon reporting for work and doing whatever was possible. Important correspondence was answered and daily shipments were made from stock. Even before the Cincinnati postoffice and express company banned all but first class mail, employees were taking all outgoing matter to Dayton and Springfield. These trips assured prompt dispatching of the company's mail and shipments of metal bases. and mechanical registering devices.

RECONDITIONING AT PORTSMOUTH (O.) "TIMES"

Frank S. Duncan, Mechanical Superintendent of the Portsmouth (O.) *Times*, describes in an interesting manner the measures taken to recondition plant equipment after the recent flood along the Ohio river. Paper, office equipment and motors were removed to higher levels when it became apparent that the plant would be flooded. The business section of Portsmouth is protected by a sea wall. The business section, however, was covered, the water having flowed over the wall and rose to a stage of 74.23 feet.

This is a discouraging sight, isn't it?

It is a view of the stereotype department of the Portsmouth (O.) *Times* after the flood waters of the Ohio River receded from the business section of Portsmouth. Mechanical Superintendent Frank Duncan and his associates were faced with the problem of reconditioning plant equipment. Mr. Duncan describes interestingly how this was done in the accompanying article.

Says Mr. Duncan:

We knew the day before the water came into the city that we were going to have a flood, and our entire force was busy day and night moving paper and office equipment to higher levels. Since our entire mechanical departments are on the second floor, we continued to print editions until the water cut off the gas supply. Ray Fletcher, our manager, then made arrangements to have our paper printed at the Chillicothe (O.) *Gazette*.

The writer and three other men stayed in the plant until 9 o'clock Sunday night when we had to leave due to water coming in the second floor and lack of light and heat. We raised the press drive and motors out of the motor pit and pulled them half way to the ceiling with a chain block. We also removed some of the motors in the composing room, and moved the furniture from the manager's office on the second floor.

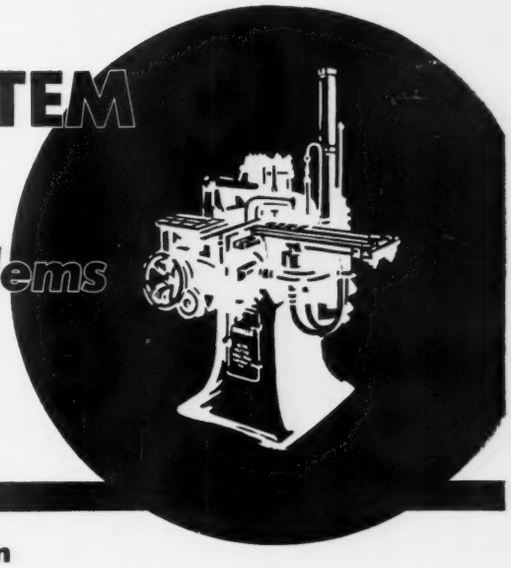
After the water started to recede our entire force of willing workers was ready to go back and clean out the plant. We found we had 33 in. of water in all of our mechanical departments. We used hose, scrub buckets, mops, brooms and shovels to get the water and mud out of the building. We had to use picks to get out the rolls of newsprint, which were swelled to half again original size. What were rolls of newsprint a few days before was now a mass of swelled, bursted paper.

After the debris and mud were cleaned out, we started to take the motors apart, clean them and get them ready to be dried out. The writer dried four of the most important motors from the stereotype department in his baking oven at home. Electricians, who were hired before the flood, were on the job. Instead of drying out the old wiring we pulled in new wire to avoid any future trouble. Bob Kuhn, our linotype machinist, had his machines ready to run when the power and gas companies provided temporary lines. We were furnished power on Wednesday and gas on Thursday, and were ready to print our paper on Saturday.

(*Continued on Page 58*)

THE MONOTYPE SYSTEM

Meets These Newspaper Problems



★ **A Better-Printed Paper**
★ **Wider Service to Advertisers**
★ **Increased Mechanical Production**
★ **Lower Cost of Operation**

Space-Selling Typography — Hand composition of single types alone provides that flexibility in the selection of the proper sizes of appropriate type faces and ornaments, and their assembly in relation to each other and to the space to be occupied, without which good typography cannot be obtained. The pulling power of attractive advertisements helps you sell space.

Fastest Typesetting on Display — It has been demonstrated many times by tests made on "live" copy during actual composing-room operation that no method of setting display in advertisements is so fast as hand work. When type and spacing material cast on the Monotype are available as needed the best typography is combined with the fastest speed in production.

Newest and Best Type Faces — All of the traditional and modern faces now generally used for display advertising are available to Monotype users, in practically all sizes up to 72 point. These include original types by Frederic W. Goudy and Sol. Hess, and foundry faces now being generally used in the composition of display advertisements. And more than five thousand ornaments and borders, and a vast array of special characters, fractions, figures, etc.

Service to Your Advertisers — Monotype-equipped newspapers always give the best service to advertisers. There is always type in the cases and material racks are full. A dozen men, if needed, may go to work on one ad, each unhindered by the rest. Advertisers get proofs when promised; corrections are easily and quickly made; editions always go out *on time!*

Other Monotype Advantages — In addition to these advantages the Monotype System provides ample reserve resources to meet "peak loads" and unexpected demands; continuous production with a minimum of non-productive time; an unlimited supply of new type, borders, ornaments, rules, leads, and slugs at all times; the greatest volume of display linage at the lowest cost; a dependable system of advertising composition, and complete non-distribution. Monotype type is ready to print as it comes from the machine—it does not need resurfacing.

LANSTON MONOTYPE MACHINE COMPANY

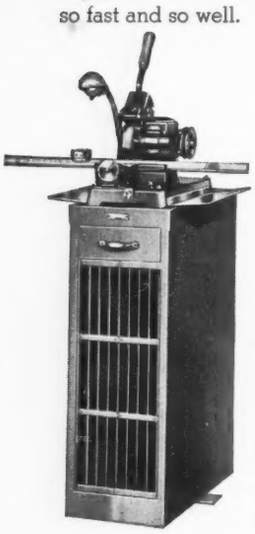
Monotype Building, 24th at Locust Street, Philadelphia, Penna.

Set in Monotype 20th Century Family

COMPLETE

MAKE YOUR COMPOSING ROOM COMPLETE

Rouse Vertical Rotary Miterer and the Rouse Band Saw are **necessary** equipment in the COMPLETE Composing Room. There is nothing else that can do their work so fast and so well.



One or one thousand, ½ pica or 144 picas long, the Rouse Vertical Rotary Miterer will make miters at the rate of 1 in 3 seconds—more than 1000 an hour — direct from strip material.

The Rouse Vertical Rotary Miterer actually does the work of hours in minutes. Its high-speed production is due to a patented clamp which holds the strip in place while the cut is being made.

Where there is a claim for efficient production the Rouse Vertical Rotary Miterer and the Rouse Band Saw should be seriously considered.

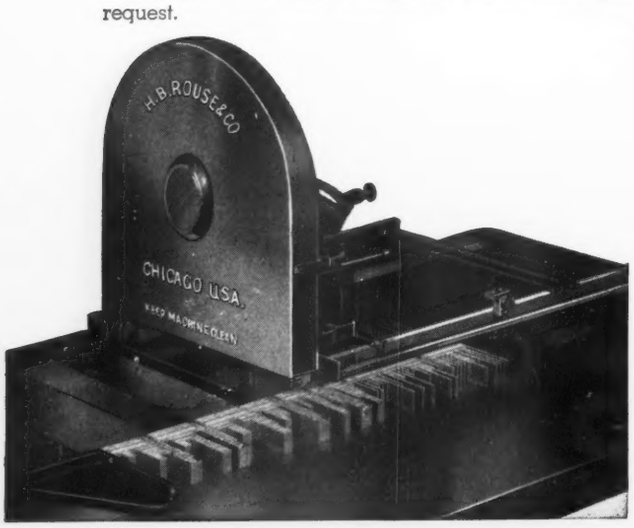
One measure or a hundred the Rouse Band Saw will cut a full galley of slugs to variable lengths in 35 seconds.

No gauges are set. No hand clamps. No risk to fingers. Slug length selection is automatic . . . clamping is mechanical . . . slugs are self-feeding . . . and saw stops when the cut is complete. The operator need not be near the machine during the actual sawing operation.

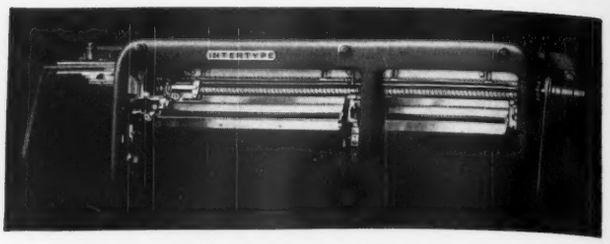
The Rouse Band Saw does not slow down the operator on line-casting machines because of varied length lines. He sets as usual and a special vise jaw does the rest. No waiting between lines.

Where speed is demanded the Rouse Band Saw makes its own place.

Complete information and prices will be sent upon request.



H. B. ROUSE & CO.
2216 Ward St., Chicago



New Streamlined Double Distributor Bracket

New Intertypes

By L. W. WILLIS*

Streamlining, pedestal base and other features discussed.

IN THE preceding issue of this publication the new Streamlined Intertypes were introduced. The several innovations in design which contribute to the modern streamlined appearance of these machines effect also certain mechanical improvements. Principal among these are the new wide pedestal base and the distributor bracket shown in the accompanying illustrations, flush covers over the front of the machine and smooth shaped castings for several parts of the machine.

Aside from improved appearance, the new wide pedestal base provides a firmer and more rigid foundation for the whole machine. Its increased weight, about ninety pounds more than the old-style base, lowers the center of gravity of the machine. This, together with distribution of weight over a wider area, means better balance and greater stability, thus more effective absorption of vibrations and smoother circulation of matrices. The pedestal affords more space under the keyboard and greater freedom and comfort for the operator. Cleaning under the machine is also made easier.

The one-piece streamlined double distributor bracket eliminates any possibility of sagging and promotes better distribution of matrices.

The flush covers over the front of the machine harmonize with the general scheme of streamlining, cover and deaden the sound of moving parts and protect the assembling mechanism from accumulations of dust and other foreign matter.

A dull black finish on the covers prevents glare in the operator's eyes and provides easy-to-clean surfaces. The covers are conveniently hinged.

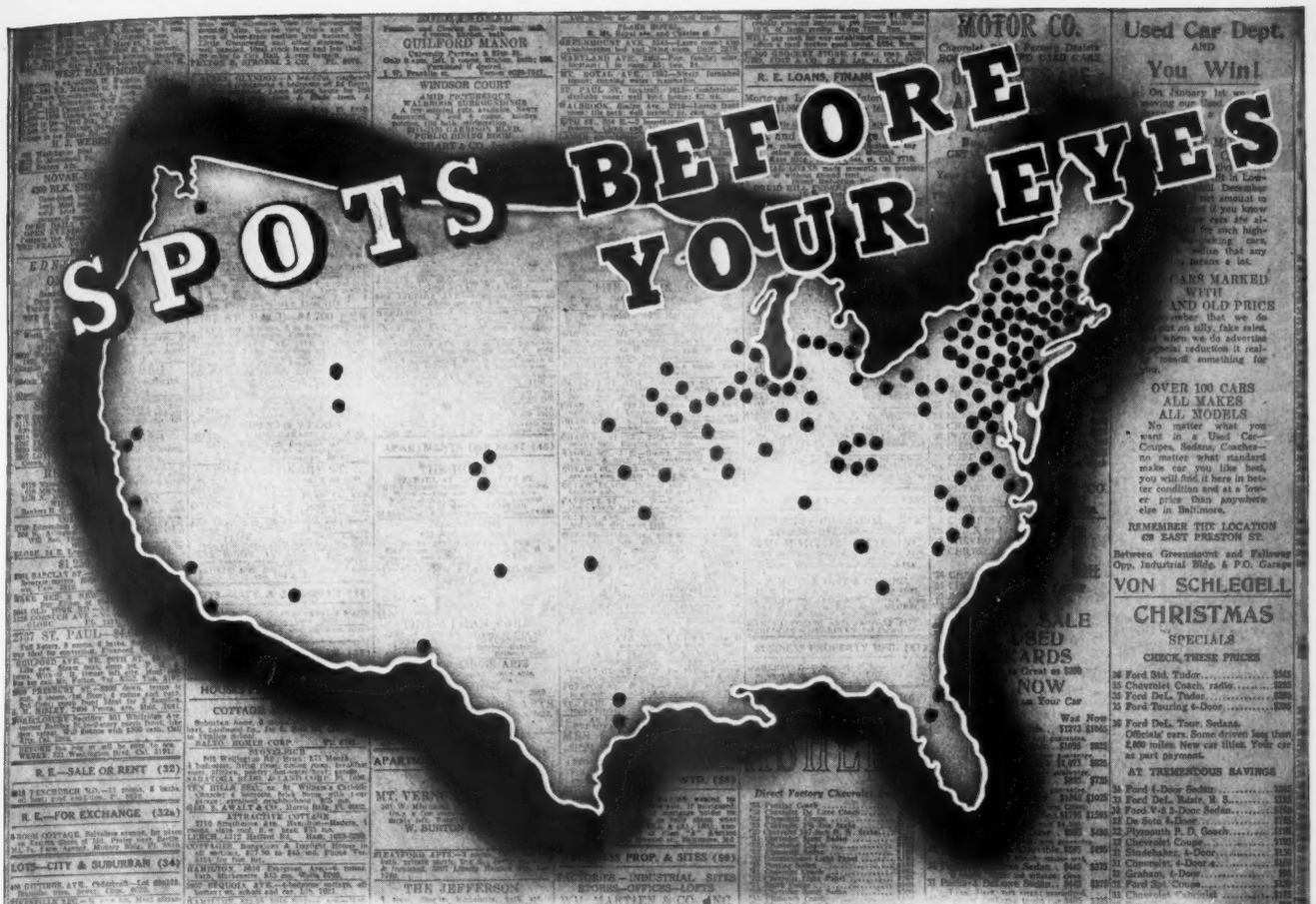
Every keyboard is easily removable. For example, the entire bank of keyboard cams at front or rear is released for individual removal of any cam by swinging down a locking bar. The rubber rolls can be withdrawn forwardly or rearwardly by loosening a nut in the right side bearings. The keybar banking bar alone is removed by releasing a thumb latch.

The curved portions of the assembler front and the channel entrance facilitate travel of matrices and cleaning or inspection operations. On mixer machines the entire upper throat section of the assembler front is hinged to swing outward for cleaning or adjusting.

Each magazine frame is provided with a sliding carriage which supports the magazine in inclined position during and after withdrawal at the front. Maga-

(*Continued on Page 54*)

*Patent and Research Engineer, Intertype Corporation, Brooklyn, N. Y.



There are 146 of them on this map,

every one representing a newspaper or publishing installation of KEMP Immersion Heating equipment. One of our publisher customers prints three million papers a day . . . another prints less than three thousand. They both get the same kind of attention at Kemp. They get what they want, or we break our necks trying. And they get that attention from the *same* individuals.

There's no second team, no substitutes in the Kemp line-up . . . There's just a small, closely-knit group of responsible, informed men who realize they can keep the wheels turning here only so long as the customers are happy, and passing the good word to others who may become customers.

We are confident that any (or all) of the publishers now using Kemp Immersion Melting with gas for stereotying will confirm what we say. Shall we send you the list? Address **The C. M. Kemp Mfg. Co., 405 East Oliver Street, Baltimore, Md.**

KEMP of BALTIMORE

MLCO'S METROMEDIUM ITALIC

The Linotype Metro family (Metrothin, Metrolite, Metromedium and Metroblack), which some time ago was re-inforced with an italic (Metrolite Italic), now has a new member called Metromedium Italic.

HERE is a brief showing of the 12 point size of Linotype Metromedium No. 2 with its *Italic. Modern man cannot be served by a tool that is just good enough or a little better*

"Metromedium Italic really has an unlimited field of usefulness," says C. H. Griffith, vice president of the Mergenthaler Linotype Company. "It can be employed in all kinds of commercial printing, in magazines and trade journals, and its weight and letter count qualify it for use in many parts of the newspaper—for news feature heads, editorial page heads, on society and women's pages and in the classified columns."

OVERLAY PRIZE CONTEST

Graphic Arts Laboratories, Div. of Letterpress Research, 201 North Wells St., Chicago, Ill., is conducting a prize contest for best examples of printing executed with Craftex Overlay. The contest closes March 31. Winners will be announced in May.

The contest is divided into several classifications as follows: Class A, work done on cylinder presses; Class B, Kelly, Miller, Miehle Vertical; Class C, platen press.

Winning entries will be selected by a group of prominent men in the printing field. Decisions of this group will be final.

The prizes and awards are as follows: A sheepskin certificate of merit will be given to each printing company in Classifications A, B and C who submits the best example of Craftex Overlay printing; a small electrotype reproduction of the certificate for use on the firm's printed matter will accompany each certificate, and $25 in cash will be given to the winning entry in each division, to be divided between the foreman and pressman as they see fit.

For every pressman and foreman whose work is entered in the contest, a markout pencil will be awarded immediately.

PRINTING EXHIBITION

Modern trends in printing and new developments in equipment will be featured in a two-day exhibition to be held at the Hotel Astor, New York, N. Y., March 29 and 30 under the auspices of the New York Employing Printers Association, Inc. From 60 to 75 nationally prominent printing equipment and supply firms will exhibit.

Great advances have been made in the past year by the equipment and supply branches of the industry. New machines have come into the market, existing models have been perfected with the view of improving production for the printer. An indication of the progress made by the "heavy industries" division of the Graphic Arts is seen in comparative figures issued by the Federal Census Bureau. In 1935 the value of the products turned out by manufacturers of printers', bookbinders' and photo-engravers' machinery and equipment was $51,559,758, an increase of 90% over the figures for 1933. While complete figures for 1936 are not yet available, the upward trend is continuing steadily.

Printers are buying more equipment to replace obsolete machines and competition is keen in the "heavy industries" to produce machines which the printer will want.

In the exhibition in the Hotel Astor, paper manufacturers and distributors, ink manufacturers, bookbinders, mounters and finishers, typefounders and manufacturers of typesetting machines, presses, rollers, and other devices and equipment will demonstrate what they are doing to place the printer who avails himself of the opportunities of modernization in a position to compete for increased business.

Addresses will tie in with the exhibits and make the demonstrations of greater practical value to the printer. Invitation is extended to all printers and craftsmen. Tickets of admission may be obtained on application to the New York Employing Printers Association, Inc., 461 Eighth Avenue, New York, or from the firms which are exhibiting.

DEVELOPS NEW INK

A new type of fast drying black printing ink has been announced by the E. J. Kelly Company. The ink has been developed specially for short runs on coated book papers and is intended for use only on presses equipped with heaters. It is claimed the ink dries instantly on paper.

The Fall River (Mass.) *Herald News* has recently placed an order with R. Hoe & Co., Inc., for a new Hoe Arched Type Super-Production Octuple Press, with latest design Super-Production Double Former Folder.

The "MAT-A-MINUTE" FORM-O-SCORCH

—Guarantees absolutely uniform temperature on every square inch of the drying area.

—Applies heat by contact rather than by absorption through heating chambers.

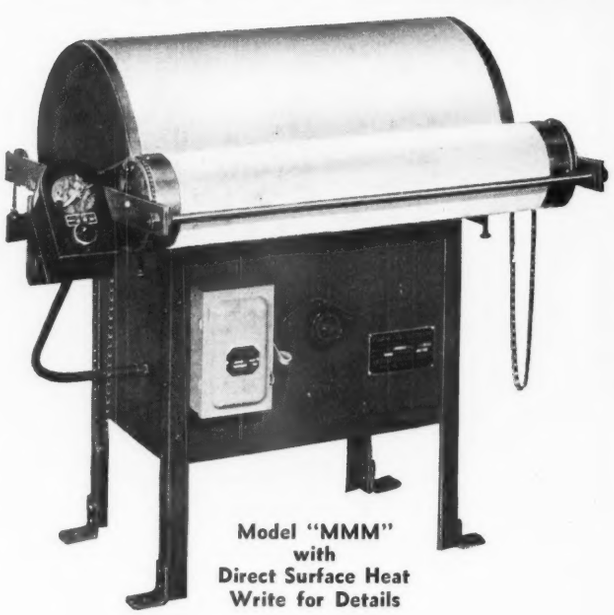
—Has a self-conforming curtain cover, insuring even pressure on the entire mat.

—Has self-adjusting tension on the cover.

—Is equipped with automatic timer.

—Can be had with either a single balanced heat or with a thousand heat selective control.

—May be had on 30-day free trial without obligation.



Model "MMM" with Direct Surface Heat Write for Details

Mechanical Superintendents

Have you received your copy of our new 34-page catalog illustrating hundreds of items for newspaper printing? Write for it today.

AMERICAN PUBLISHERS SUPPLY

BOX 131—WEST LYNN, MASS.

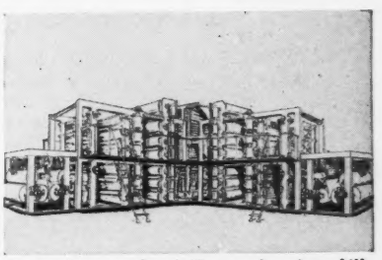
YOU DON'T KNOW THIS MAN . . .

but he can help you print a better newspaper

ARMED with the tools of precision the Hoe inspector is the customers' watch-dog. Through his array of micrometers, precision calipers, ring gauges, plug gauges and other sensitive measuring devices must pass every element that enters into the construction of Hoe Presses. Strategically located in every department of the Hoe plant, he is proud of his discerning eye and the critical standards to which he adheres.

To him goes the credit for preserving unaltered the skill of Hoe's designing engineers. He is your assurance of the highest standards of press construction and smooth co-ordination of working parts . . . two features of every Hoe Super-Production Newspaper Press which produce fine quality presswork, reduce press maintenance and minimize power consumption.

You do not know this man, but he is waiting to serve you at the World's Largest Press Manufacturing Plant whenever you need new pressroom equipment.



Dramatic example of Hoe engineering skill . . . and evidence of the extensive Hoe facilities for the construction of the unusual . . . 26 Unit Super-Production Multi-Color Newspaper Press . . . the world's largest . . . fastest . . . and most modern . . . recently produced for The Cleveland Plain Dealer.

HOE
Builds the Best

R. HOE & CO., Inc. ***General Offices:*** **910 E. 138th St. (at East River)**
New York City

BOSTON · SAN FRANCISCO · CHICAGO · BIRMINGHAM · LONDON

Executive Comment on Mr. Bauerfeind's Cost System

Missed Some of Most Important Things

Dear Editor: In the February issue of *Printing* Equipment *Engineer is* printed a story entitled "Executive Cost Control."

The story tells about machine efficiency, etc.

While it is well written, I think it has missed some of the most important things.

What kind of equipment do the linotype operators have to work with?

Is the machinist efficient to the extent that the machines are kept in good operating order?

Are the magazines easily accessible to facilitate rapid change?

Are their convenient dump banks?

Is the linotype department in a composing room the only thing of importance?

Is the ad alley supplied with plenty of slugs at all times so the slugs can be taken up quickly by the compositors?

Inasmuch as a higher standard of typography is demanded by department stores than was demanded a few short years ago, letter spacing and thin spacing is necessary. Do the hand men have plenty of thin spaces immediately available and right in front of them?

Is the distribution of hand type followed up closely to avoid picking sorts and turned letters?

To the best of my knowledge and belief, there is not one newspaper composing room in these United States where sufficient attention is paid to these important details. Management yells "production" but does not supply high-speed labor-saving devices which would enable the compositors to produce.

I know one certain newspaper organization that spent four million dollars for a building but a lead or slug longer than thirty picas (5 in.) cannot be found in the composing room. The compositors must do their own cutting.

Question: Why pay $50 a week to a man for cutting slugs when a $20-a-week apprentice boy can do this work?

And so on and so on.

I could write a volume on the subject. I know these conditions exist and I am forever surprised that efficiency experts ignore them.

Hop in your car and come down and visit our composing room some day. See our composing room and see the labor-saving devices originated exclusively by us and for us and in use only in our plant. This invitation is extended to Mr. Bauerfeind as well.

Actually, I would like to help composing room production men achieve maximum efficiency with minimum wage expenditure. It has been my experience that the lack of both efficiency and minimum wage expenditure cannot be charged to the worker but is due 99% to the lack of equipment or to improper equipment.

Edwin H. Stuart, President,
Edwin H. Stuart, Inc.,
Pittsburgh, Pa.

Should Stimulate Interest

Dear Editor: I was interested in reading Mr. Bauerfeind's article in the February issue of *Printing* Equipment *Engineer*. For six years at Des Moines and later here in Akron I have used the same system to determine composing room costs. Page cost figures are of little value and I believe are often misleading. We determine the number of hours labor required each day to produce that day's output. The daily and weekly report shows the amount of time devoted to each classification of work for each shift and also the production for the shift. Mr. Bauerfeind's articles should stimulate additional interest in the subject and that will be beneficial to everyone who will permit themselves to become interested.

Leon A. Link, Supt. Composing Room,
Akron (O.) *Times-Press*.

No Substitute for Organization, Cooperation and Loyalty

Dear Editor: If the system of cost accounting as advocated by Mr. Bauerfeind is intended only as a check-up on machine production, it seems to me it would work out in most plants. As a means of checking on employe's efficiency on the floor or makeup, I am very doubtful of its value. There are many things over which the Composing Room has no control, and there are many reasons why this efficiency index inch could not be applied to floor work in the Composing Room. Any Composing Room foreman can give you an imposing list of these reasons, and an analysis of the list will demonstrate very clearly why they tend to reduce the efficiency rating of a newspaper Composing Room. My experience is that there is no substitute for organization, cooperation and loyalty in a Composing Room.

John D. MacIntosh, Mechanical Superintendent,
The Newburgh (N. Y.) *Beacon News*

Records Useful in Explaining Rising Costs

Dear Editor: We at the *Pantagraph* were pleased to read L. E. Bauerfeind's article in *Printing* Equipment *Engineer* on Cost Control.

We have used a cost control system for many years and have based our figures on production and hours as well as dollars and cents, which we think is all important. Many discussions have been held and plans presented in our Illinois and Iowa Newspaper Executives Associations for cost-finding systems which have proved to be of great value.

Most of the boys at some time or other have been called upon to explain why costs were rising. Unless one is prepared with something tangible in the way of records it is rather difficult to explain the reasons for rising costs.

A simple cost accounting system takes but little time to keep and is always well worth the effort expended. Operating conditions vary according to size of town, locations and scale of pay but that does not minimize the importance of keeping cost and production records. Usually there is not much gained by comparing costs with other newspapers but comparing them with one's own records from year to year is important.

We shall be anxious to see the next issue of *Printing* Equipment *Engineer* which will carry Mr. Bauerfeind's next article. Articles of this nature are always read eagerly by composing room executives.

Russell B. Miller, Mechanical Superintendent,
The Daily *Pantagraph*, Bloomington, Ill.

Flat-Scale Composing Rooms

Dear Sir: The incentive for employing the efficiency inch explained by Mr. Bauerfeind in the February *Printing* Equipment *Engineer* must be confined to those composing rooms where the operators and hand men work under piece scale conditions. Naturally, it is to the advantage of the publisher to establish some sort of efficiency standard. It runs in my mind that the system would have to be revised in composing rooms operating under flat-scale conditions. A standard of competency is a desirable thing—if arrived at by reasonable means—otherwise there would be no way of determining composing room costs; neither would the composing room executive be able to maintain discipline in production matters. Conditions vary so much in various sections that I am sure no one set formula is suitable. I wonder how Mr. Bauerfeind would handle a flat-scale composing room in a highly competitive city where a considerable amount of overset, kill-out and non-credit matter is composed every day? P. M.

Empire—Onyx

Two new faces in keeping with the trend toward tall, condensed letters have been announced by American Type Founders. The first, Empire, is currently available at all ATF Branches while the second, Onyx, is scheduled for release April 1st.

THIS IS EMPIRE

Empire is an original "thick and thin" design without bizarre letter forms. Empire is cut in caps only, in five sizes that range from 36 to 96 point.

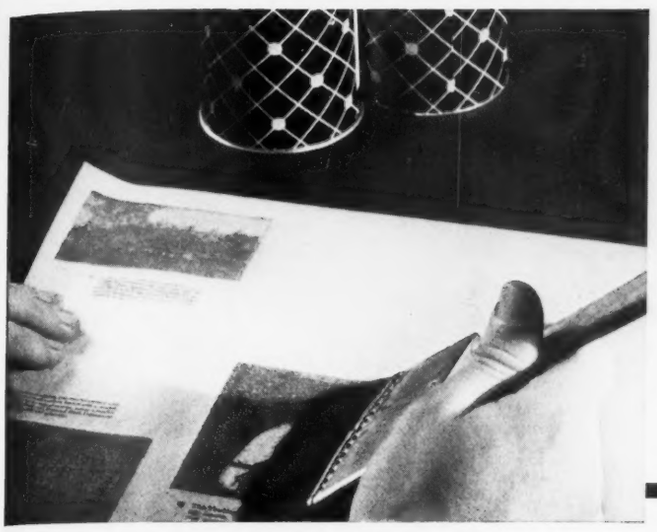
That Onyx will find extensive usage is assured by the demand for the Victorian blackface letter from which it was developed. Onyx is a modernization of Modern

This is ONYX

Roman Bold Extra Condensed. In this new version, particular attention has been paid to the hairlines and serifs with improved impression as an objective. The hairlines have been given a bit more weight and the serifs are more cleanly cut than in previous designs. Onyx is being cut in six sizes, from 30 to 96 point.

Win this CRAFTEX OVERLAY PRIZE CONTEST

ENTER NOW . . . Contest Closes Midnight March 31st



WIN national recognition and a prize—at the same time cut down makeready time and do your work easier and faster.

CRAFTEX CHEMICALLY OVERLAYS your cuts, eliminates tedious hand-cutting of tissues—and does a better job. Positive, accurate overlay absolutely brings out blacks and high lights without necessity of over impression of solids and loss of detail through too little impression on greys.

CRAFTEX overlay insures even impression over the entire form, insuring high quality printing, minimum wear on cuts and press—and an enormous saving in time.

GRAPHIC ARTS LABORATORIES
184 W. LAKE ST. CHICAGO

SEE how this new, easy chemical process works. Send the coupon for complete details—and learn how you can win a CASH PRIZE of $25.00 and various other prizes well worth your while.

The return of the coupon does not obligate you in any way. Mail it now. Better hurry, because the contest closes at midnight, March 31.

I want to enter your contest. Please send complete details on CRAFTEX Overlay and Contest.

NAME .....

COMPANY .....

ADDRESS .....

CITY..... STATE.....

EDES PHOTO-ENGRAVING

EDES SUPERFINE QUALITY ZINC

ZINC

THE STANDARD FOR MORE THAN 80 YEARS

UNIFORMLY CONTROLLED BY MODERN SCIENTIFIC EQUIPMENT

THE EDES MANUFACTURING CO., PLYMOUTH, MASS.

Stocks Carried by the Following Representatives

John H. Heimbuecher Metals Co., 514 No. Third St., St. Louis, Mo.
Gazzolo Drug and Chemical Co., 119 So. Green St., Chicago, Ill.
E. H. Walker Supply Co., Printcraft Bldg., Washington, D. C.
Selby Mohr, 883 Mission St., San Francisco, Cal.
C. S. Illingworth, 49 Springville Avenue, Buffalo, New York
Thompson-Hayward Chemical Co., 2228 Blake St., Denver, Colo.
Thompson-Hayward Chemical Co., 909 2nd St. So., Minneapolis, Minn.
Metzger Photo Supply Co., 1091 So. Main St., Akron, Ohio
G. C. Dom Supply Co., 125 East Pearl St., Cincinnati, Ohio

Look into This

FOR GREATER
Dry Mat
SATISFACTION

NO matter how exacting your mat requirements are, there's a Wood Dry Mat that fills the bill to perfection. Why not try a test batch and see for yourself why Wood Dry Mats are demanded by more than 300 stereo foremen. You can count on Wood for consistent quality and uniformity.

Always WOOD DRY MATS *Uniform*

WOOD FLONG CORP.
HOOSICK FALLS • NEW YORK

Patents

JANUARY-FEBRUARY

Bookbinding:

2,068,603. BOOKBINDING. Allen L. Grammer, Meadowbrook, Pa., assignor to Curtis Publishing Company, Philadelphia, Pa., a corporation of Pennsylvania. Application December 19, 1935, Serial No. 55,231. 3 Claims. (Cl. 281—21.)

1. A book having a cover and a flat back and nested folded leaves and a series of depressions extending from the outside of the back inward and stopping short of the inside center fold, and having an adhesive uniting the cover and entering the depressions.

2,069,211. METHOD OF BOOKBINDING. Frank Brown, Malden, Mass. Application March 15, 1935, Serial No. 11,245. 2 Claims. (Cl. 281—21.)

1. The method of bookbinding which consists in placing the leaves of the book in a stack, applying to one or both faces of the stack a collection of leaves and a reinforcing fabric strip secured together adjacent to one edge together with an outer leaf secured to the reinforcing strip at a distance from such edge, the secured edges of such collection of leaves and reinforcing strip being registered with an edge of the before named stack of leaves, incising the edge of the leaves, uniting a fibrous binding strip to such incised edges by an adhesive in liquid state of a character such that it penetrates the incisions so produced and upon drying is tough and flexible, folding back the reinforcing strip and attached outer leaf into substantial register with the bound edges of the leaves, and uniting the folded over part of the reinforcing strip to the fixed part of the strip.

Composing Machines:

2,068,004. METHOD AND APPARATUS FOR HANDLING TYPE METAL. George L. Curle and William H. F. Thompson, Minneapolis, Minn., assignors to The Monomelt Company, Minneapolis, Minn, a corporation of Minnesota. Application May 9, 1930, Serial No. 450,993. 9 Claims. (Cl. 276—44.)

1. The method of handling type metal in a print shop including a typecasting maching having a melting pot and an auxiliary melting pot, which consists in providing a plurality of receptacles each adapted to receive scraps and waste pieces of type metal, in providing a plurality of separate stations each conveniently situated in remote relation to the typecasting machine and adapted to receive at least one of the receptacles, in accumulatively loading the receptacles at each of the stations with scraps and waste pieces of type metal respectively formed at the stations, in providing a station adjacent the typecasting machine adapted to receive the receptacles, in transporting receptacles loaded with scraps and waste pieces of type metal from the plurality of separate stations in remote relation to the typecasting machine to the station adjacent the typecasting machine selectively discharging the material contained in the receptacles at the last mentioned station into the auxiliary melting pot and melting the same whereby the type metal is kept substantially free from dirt and foreign matter, the print shop is kept clean, a molten metal of high quality and one comparatively free from dross is produced, and remelting of the type metal into bars or ingots is eliminated.

2,068,669. INDICATING MECHANISM. Maurus T. Goetz, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware. Application February 1, 1935, Serial No. 4,434. 12 Claims. (Cl. 164—112.)

1. In a machine for preparing control forms for typographical machines which employ a plurality of magazines, a plurality of operating elements, an indicator comprising a support with suitable indications thereon and a shield, reciprocable each with respect to the other, and means selectively operable by any one of the elements for controlling the indicator to establish a predetermined relation between the support and the shield according to the element operated.

2,068,288. ASSEMBLING MECHANISM OF TYPOGRAPHICAL COMPOSING MACHINES. Eric Gayter and Arthur Staniland Hayward, Altrincham, England, assignors to Linotype and Machinery Limited, London, England, a limited-liability company of Great Britain. Application October 23, 1935, Serial No. 46,256. In Great Britain October 25, 1934. 10 Claims. (Cl. 199—20.)

1. In a typographical composing machine, the combination with a pair of superposed magazines each provided with a set of escapements and having the discharge ends located in an inclined plane, of an assembler entrance including a relatively fixed lower section adapted to receive matrices discharged from either magazine, a relatively fixed upper section adapted to receive matrices discharged from the upper magazine and a pivoted intermediate section adjustable to convey to the lower section matrices discharged from either magazine, escapement-actuating tappets mounted on the upper section, strikers carried by the intermediate section, and means adapted to adjust the intermediate section on its pivot to bring the strikers into operative relationship either with the escapement mechanism of the lower magazine or with the tappets of the upper entrance section.

2,068,310. DISTRIBUTING MECHANISM OF TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINES. William Edgar Aynge, Upper Sydenham, London, England, assignor, by mesne assignments, to Mergenthaler Linotype Company, Brooklyn, N. Y., a corporation of New York. Application October 4, 1935, Serial No. 43,484. In Great Britain October 11, 1934. 9 Claims. (Cl. 199—39.)

1. In a typographical composing and distributing machine, the combination of a plurality of vertically superposed distributors and magazine entrances arranged in overlapping relationship for conducting matrices from the distributors to a corresponding plurality of magazines, of a pivot for an upper magazine entrance located at the rear and above the next lower distributor, and a support for the pivot displaceable relatively to the distributors to carry the entrance from and to operative position.

2,068,670. AUTOMATIC MIXER CONTROL SYSTEM. Maurus T. Goetz, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware. Application June 22, 1935, Serial No. 27,865. 23 Claims. (Cl. 199—20.)

1. In an automatic control apparatus, devices to be qualified for operation alternatively, means for qualifying the devices, means responsive to signals for controlling the qualifying means, and means for rendering the signal responsive means non-responsive to successive identical signals.

2,069,240. KEYBOARD PERFORATOR AND COUNTER. Maurus T. Goetz and Albert H. Reiber, Chicago, Ill., assignors to Teletype Corporation, Chicago, Ill., a corporation of Delaware. Application June 3, 1932, Serial No. 615,104. 27 Claims. (Cl. 164—112.)

1. In a keyboard device, a plurality of keys, a constantly rotating shaft, a perforating device, a counting device, a cam carried by the shaft to perform the perforating operation, a pair of cams carried by the shaft to initiate and control the counting operation, means controlled by the keys to effectuate through the instrumentality of the cams the operative-

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ness of the devices, and means comprising a double trip-off latch to define the limits of operation of the devices.

2,070,183. APPARATUS FOR MAKING FOLDS IN TYPE STRIPS USED FOR CASTING BARS OF PRINTERS' TYPE. Julius Schneider, Munich, Germany. Original application March 1, 1934, Serial No. 713,458. Divided and this application August 8, 1935, Serial No. 35,282. In Germany March 4, 1933. 1 Claim. (Cl. 101—401.6.)

An apparatus for forming folds between the ends of words on an intermittently advanced type strip provided with perforations, the combination of opposed pincers adapted to grip parts of the strip therebetween, means for imparting relative movement to the pincers, a feeler adapted upon entering one of the perforations to stop advance movement of the strip and to initiate movement of the pincers and a driver actuatable to bend the strip and move the bent portion between the faces of the pincers.

2,070,184. TYPE-CASTING MACHINE. Julius Schneider, Munich, Germany. Application January 2, 1936, Serial No. 57,135. In Germany November 26, 1934. 9 Claims. (Cl. 199—73.)

1. In a typecasting machine, the combination of a mold having at least one movable part whereby its effective capacity can be varied, slidable matrix carriers for type matrices of different widths, a movable holder supporting a plurality of the matrix carriers and adapted to place any selected carrier in position facing the mold, and means for pressing the selected matrix carrier against the front of the mold and moving the movable part of the mold a predetermined distance to adjust the width of the mold to the width of the matrix carried by the selected matrix carrier.

Feeding, Folding, Delivery:

2,065,000. WEB REGISTERING DEVICE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application February 28, 1931, Serial No. 519,176. 3 Claims. (Cl. 271—2.6.)

1. In an end registering device, the combination of a forward and a rear hollow registering roll spaced apart, each having a perforation, the interior of the rolls being adapted to be exhausted, for carrying a web having perforations at intervals just far enough apart so that when the web is in proper register a forward perforation is located beyond the perforation in the forward roll and rearward perforation in the web is located just back of the perforation in the rearward roll, means for adjusting the length of the web between the rolls, and means whereby the web will be shifted forward or back if either of the perforations in the web comes into registration with a perforation in one of the rolls.

2,065,001. WEB SPLICING DEVICE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application August 29, 1932, Serial No. 630,972. Renewed May 6, 1935. 6 Claims. (Cl. 242—58.)

2. In a web splicing device, the combination of a swinging frame, a shaft on the frame, a handle on the frame for swinging it manually, a series of brushes fixed on the shaft, and a series of severing knives also fixed to the shaft, the handle, brushes and knives being spaced from each other about the shaft in such positions that when the handle is turned it will first move the brushes into contact with the web and thereafter bring the knives into contact with the web for severing it.

2,065,178. FEEDING AND COATING SYSTEM. Theodore A. Federwitz and Walter T. Bailey, Philadelphia, Pa., assignors to Stokes & Smith Company, Summerdale, Philadelphia, Pa., a corporation of Pennsylvania. Original application November 24, 1928, Serial No. 321,635. Divided and this application November 25, 1931, Serial No. 577,210. 26 Claims. (Cl. 91—50.)

4. Wrapper feeding and coating mechanism comprising an adhesive applying roll, a suction chamber adjacent the roll, conveyor belt structure passing thereover, to transport adhesive coated wrappers, and means to provide an air blast on the coated side of wrappers conveyed by the belt structure.

2,065,300 DELIVERY MECHANISM FOR PRINTING PRESSES. Howard M. Barber, Pawcatuck, Conn., assignor to C. B. Cottrell & Sons Company, Westerly, R. I., a corporation of Delaware. Application November 14, 1935, Serial No. 49,684. 14 Claims. (Cl. 271—79.)

1. A sheet delivery for printing presses comprising inner and outer traveling endless carriers, an interposed rotary carrier, and means for driving the inner endless carrier at approximately the surface speed of the press, and both the rotary carrier and the outer endless carrier at a higher surface speed.

2,065,301. DOUBLE PILE FLAT SHEET DELIVERY FOR ROTARY PRINTING PRESSES. Howard M. Barber, Pawcatuck, Conn., assignor to C. B. Cottrell & Sons Company, Westerly, R. I., a corporation of Delaware. Application April 2, 1936, Serial No. 72,309. 10 Claims. (Cl. 271—76.)

1. In a double pile flat sheet delivery for printing presses, an inner carrier traveling in an endless path, an outer delivery carrier also traveling in an endless path, an interposed rotary transfer carrier, means for driving the inner carrier at the surface speed of the press and the other carriers at a higher surface speed, inner and outer delivery piles, and means for taking the sheets from the outer delivery carrier and depositing them on to their respective piles.

2,065,487. SHEET FEEDING APPARATUS. Albert Broadmeyer, Harrisburg, Pa., assignor to W. O. Hickok Manufacturing Company, Harrisburg, Pa., a corporation of Pennsylvania. Application October 31, 1932, Serial No. 640,570. 8 Claims. (Cl. 270—37.)

1. In combination with sheet connecting mechanism, and a conveyor for carrying sheets thereto to be connected, mechanism for feeding sheets to the conveyor, and means driven from the connecting mechanism for driving the conveyor and feeding mechanism in relatively variable predetermined timed relation.

2,065,989. FOLDING ATTACHMENT. Georg Spiess, Leipzig, Germany. Application May 29, 1935, Serial No. 24,111. In Germany May 19, 1934. 6 Claims. (Cl. 270—62.)

1. An attachment for standard folding machines of the type having a primary conveyor and folder and a supporting frame, the attachment including brackets adapted to be attached to the frame at one side of the conveyor of the standard machine, feed table leaves supported by the brackets in spaced relation to each other, one of the leaves extending across the primary conveyor upon the brackets being attached to the frame, a folding mechanism carried by the brackets in vertical alinement with the space between the leaves, and a delivery mechanism carried by the brackets in vertically spaced relation to and parallel with the folding mechanism, the delivery mechanism being positioned on the brackets to deliver folded sheets to the primary conveyor whereby one of the leaves is spaced above the upper surface of the primary conveyor.

2,066,179. CONTINUOUS PRINTING METHOD AND APPARATUS THEREFOR. Ray B. Keller, Erie, Pa., assignor to Hammermill Paper Company, Erie, Pa., a corporation of Pennsylvania. Application June 18, 1935, Serial No. 27,147. 14 Claims. (Cl. 101—219.)

1. A method of printing a plurality of parallel rows of impressions comprising passing a plurality of loops of an endless belt carrying printing forms into contact with a surface to receive the impressions.

2,066,196. SHEET SEPARATING MECHANISM. Karl Blaettner, Radebeul, Germany. Application December 24, 1935, Serial No. 56,036. In Germany March 6, 1935. 7 Claims. (Cl. 271—38.)

2. In a printing press, or the like, with a feed of successively underlapped sheets, a sheet separating apparatus comprising a lay mark, an overmark, and a pressing member adapted to deflect a gripped sheet and the front edge of the second sheet at such a time as the gripped

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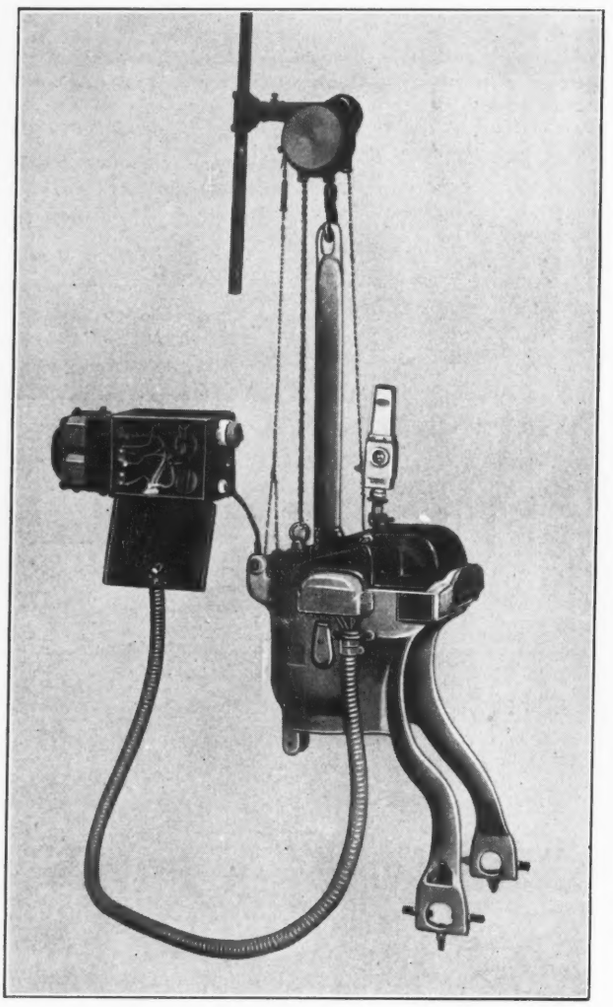

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sheet is passing around the overmark and the front edge of the second sheet has not reached the overmark, and to such an extent that the leading edge of the second sheet is forced under the overmark.

2,066,306. WEB GUIDING ROLLER SUPPORT. Albert J. Horton, White Plains, N. Y., assignor by mesne assignments, to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application May 21, 1932, Serial No. 612,699. 27 Claims. (Cl. 271—2.1.)

1. In a printing machine, in combination, a roller and a supporting device for the roller adjustable to permit its axis to pivot at a plurality of points and under the center of a web variably positionable thereon and maintain equal tension on both edges of the web.

2,066,307. WEB FEEDING MECHANISM. Albert J. Horton, White Plains, N. Y., assignor, by mesne assignments, to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application June 7, 1935, Serial No. 25,389. 23 Claims. (Cl. 271—2.1.)

1. In a printing machine, the combination of a web guiding roller, a supporting device for the roller adjustable to position the roller to permit it to swing about any one of a plurality of transverse axes spaced apart longitudinally along, and disposed substantially in line with, the surface of the roller, and means to adjust the supporting device.

2,066,415. WEB REGULATING MECHANISM. Michael J. Milmoe, Glen Ellyn, Ill., assignor to F. B. Redington Co., Chicago, Ill., a corporation of Illinois. Application June 9, 1933, Serial No. 675,037. 16 Claims. (Cl. 271—2.6.)

1. A web feeding mechanism for feeding webs having indicia thereon at predetermined points along the web comprising feeding means for feeding the web along a predetermined path, a rotatable driven element connected to the feeding means, a rotatable driving element rotatable on an axis coincidental with the axis of rotation of the driven element and actuated continuously, a releasable connection between the driving and driven element for connecting the same in driving relation with each other comprising a plurality of pawls on one of the elements, a ratchet on the other of the elements, means for urging the pawls into engagement with the ratchet, the pawls being spaced from each other a distance such that only one of the pawls is in engagement with the operative face of a tooth on the ratchet, means operable when the feed of the web varies more than a predetermined amount from that desired for moving the pawl which is in engagement with the tooth on the ratchet out of engagement with the tooth to thereby permit relative movement between the elements until the other of the pawls comes into engagement with a tooth on the ratchet and stops the relative rotation between the elements, whereby the total amount of actuation of the feeding means by the driven element is varied from that which would occur if the first pawl was in engagement with the ratchet and remained operative.

2,067,380. SHEET FEEDING MACHINE. Leonard H. Cross, Port Washington, N. Y., assignor to Cross Paper Feeder Company, Boston, Mass., a corporation of Massachusetts. Application March 18, 1936, Serial No. 69,431. 15 Claims. (Cl. 271—38.)

1. In a machine for feeding sheets, the combination with a sheet support, and mechanism for advancing a bank of sheets upon the sheet support, of sheet delivery mechanism, feed-off devices adapted to move successive sheets from the bank to the delivery mechanism, and means actuated by the movement of the feed-off devices for controlling the bank advancing mechanism.

2,067,565. DELIVERY MECHANISM FOR PRINTING MACHINE FOLDERS. Nicholas De Manna, Brooklyn, N. Y., assignor, by mesne assignments, to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application December 27, 1933, Serial No. 704,165. 15 Claims. (Cl. 271—64.)

1. In a delivery mechanism for a printing machine folder, separate delivery fans rotatable in the same direction, means for directing alternate products from the folder to the same operative side of each fan, and means for conveying the products from the separate fans away from the folder in the same direction.

2,069,115. LABEL FOLDING MACHINE. Arthur Rosenthal, Grand Rapids, Mich., assignor to The Rose Patch & Label Company, Grand Rapids, Mich. Application August 24, 1935, Serial No. 37,636. 9 Claims. (Cl. 270—61.)

1. In a label cutting and folding machine of the type in which a label strip is fed to the machine and individual labels are cut therefrom, the combination of label holding jaws having a triangular fold form thereon with the upper sides of its edges beveled, the jaws being disposed to grasp individual labels with the fold form above and extending transversely of the individual label and with its apex disposed substantially at an edge of the label, a folder having a triangular notch therein complemental to the fold form, means for disposing said label holding jaws with a label therein with the fold form above and in register with the triangular notch in the folder, means for raising the folder past the fold form to bend up the corners of the label held in said jaws, comprising a plunger engaging the folder and having a cam follower thereon, means for advancing the folder over the fold form to bend back and crease the label over the fold form after the folder has been raised past the fold form, comprising a bell crank lever having a notched substantially vertical arm engaging a pin on the folder and a horizontal arm having a cam follower thereon and a cam slide having a cam to engage the cam follower on the plunger and a second cam disposed to engage the cam follower on the plunger and a second cam disposed to engage the cam follower on the bell crank lever, the cams being timed to cause the operation of the raising means and then the advancing means, and means for yieldingly holding the folder in contact with the fold form during the advancing movement of the folder.

2,070,317. METHOD OF AND APPARATUS FOR SPLICING WEBS. Oscar Charles Roesen, Eastchester, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application March 2, 1932, Serial No. 596,236. 7 Claims. (Cl. 242—58.)

1. The method of splicing a running web to a rotating web roll, which consists in providing the web roll with adhesive having a temporary covering over it and, at a time just before the splice is to be made, displacing the covering to enable the adhesive to spread on the surface of the roll to unite the surface of the web roll to the running web.

2,070,324. METHOD OF AND MEANS FOR FOLDING PAPER PRODUCTS. Isidor Tornberg, Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application July 22, 1932, Serial No. 623,920. 5 Claims. (Cl. 270—65.)

1. The method of folding papers which consists in slitting a web at a point at which the end of the last folded edge is to be located to weaken the folded product at that point and facilitate the production of the last fold.

2,070,327. PAPER ROLL BREAKING MECHANISM. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application June 8, 1931, Serial No. 542,865. Renewed July 6, 1936. 3 Claims. (Cl. 242—75.)

3. The combination with means for supporting a web roll in position to supply the web to a printing press, of means tending to rotate the roll by action through its central axis, when the web is being slowed down, at a speed slower than web speed, and means for operating the last named means in proportion to the speed of the press.

Miscellaneous:

2,068,649. APPARATUS FOR PRINTING ON GLASS AND THE LIKE. Carl G. Anderson, Boston, Mass. Application December 21, 1933, Serial No. 703,446. 5 Claims. (Cl. 101—368.)

1. A printing plate for printing upon glass or the like comprising an integral metallic sheet of uniform thickness with a flat face having means for printing a design, the body of the sheet being provided with intersecting channels extending from the reverse face of the sheet into proximity to the printing face, thereby rendering the printing-surface zone

(Continued on Page 48)

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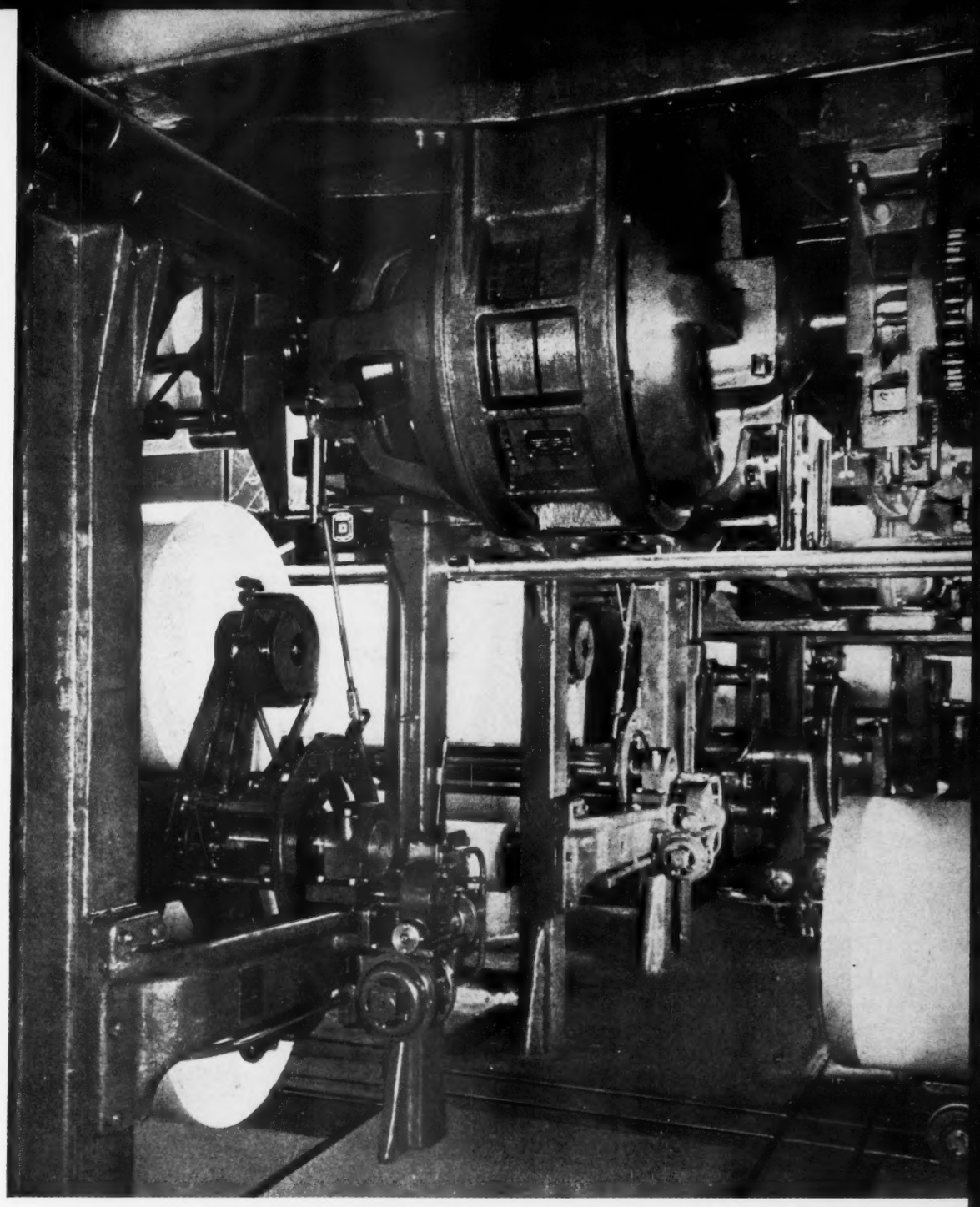

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George Sweeney, Sales Manager and Harry Baus, Plant Manager in the Art Gravure Corporation of Ohio's new building.

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A streamlined production line is incorporated in the design of the building. Production starts directly at the business offices on the second floor. Pictures are routed to the art and camera rooms directly at the rear of the business offices. Drying and retouching rooms are next in line. The process is continued in the etching rooms on the floor below and the work flows to the pressroom in a natural path.

The building was designed by Hubbell & Benes, Cleveland architects. The plant was constructed by Sam W. Emerson Company.

The plant went into production February 23, when a new rotogravure press printed the art gravure section for the Toledo *Times*. In this new plant will be produced gravure sections for other newspapers in the territory, including the Cleveland *Plain Dealer*. Commercial job printing also will be produced.

The new building covers an area 90 ft. by 284 ft. at 1845 Superior Avenue and extends from Superior to Rockwell Avenue. It is a two-story brick structure, the front of which is Indiana limestone. The building was erected at an approximate cost of $425,000.

Arrangement of the Building

The front section of the building is two stories high. The rear section of the building, while two stories high, contains only one floor. This high vaulted room houses the press equipment. The basement is divided into paper storage space and a garage for trucks used by the Cleveland *News* immediately adjacent. Storage space for 700 rolls of rotogravure printing paper weighing one ton each has been provided.

Business Offices

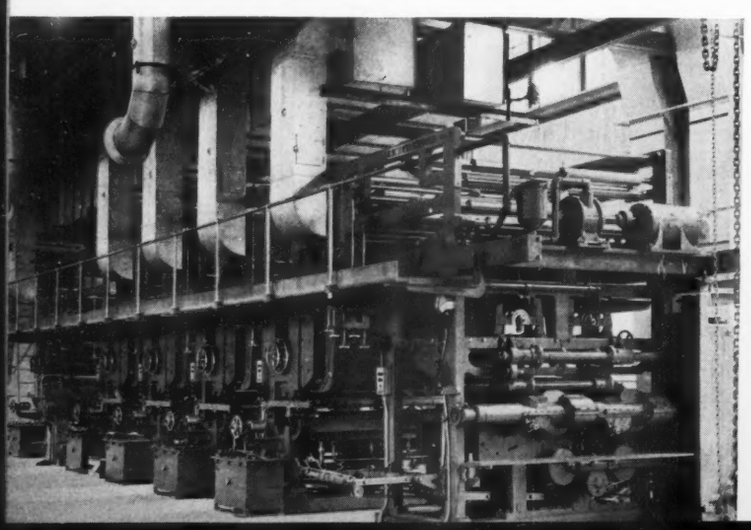
The business offices of the corporation are located in the front section of the second floor. Directly back of these offices are located the art department, the photograph galleries, dark rooms, drying and retouching rooms.

Production Department

In the front section of the first floor are located the etching rooms, the storage and grinding rooms for the printing cylinders and the cylinder plating plant.

Continued on Page 52

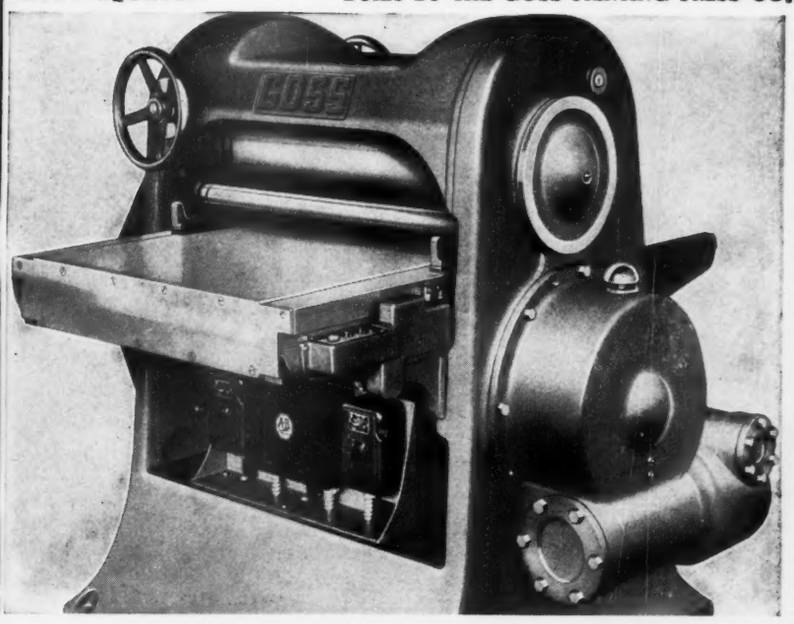
View of new Hoe Color rotogravure press which has just been installed in the new plant of the Art Gravure Corporation of Ohio in Cleveland. This press will deliver 60,000 monotone eight-page papers or 30,000 papers in two or more colors per hour.



View of new printing plant in Cleveland which is occupied by the Art Gravure Corporation of Ohio. The building was constructed especially for the production of rotogravure printing, both in monotone and color. Every essential to fine gravure production has been incorporated in the building design.

Hubbell & Benes, Cleveland, Architects. Sam W. Emerson Company, Contractors

SKF-EQUIPPED BUILT BY THE GOSS PRINTING PRESS CO.



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HELP QUICK MOLDING OF DRY MATS

THERE'S no doubt about quick, easy molding of dry mats, combined with top efficiency, low costs, and no damage to type on this Goss Matrix Roller No. 45-S. There are ten SKF Ball and Roller Bearings on the cylinder and on the 5 h.p., 1800 r.p.m. direct-geared two-speed motor drive, double worm reduction type.

Four SKF Spherical Bearings and six SKF Ball Bearings keep shafts in proper alignment without adjustments, needless power consumption or constant attention. The result is smooth action, minimum power costs, and dependability. Next time you buy printing equipment make certain it's SKF-equipped.

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WITH ad patronage increasing—big editions almost every day — Stereo Foreman Frank is keeping up to schedules chiefly because of the "first plate" excellence due to Certified Mats.

He knows there is not time in his hurried routine to throw back the first one or two plates from each mat into the pot, before getting a good one. Since he changed to Certified, this is not necessary.

For dependable stereotyping rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION

338 Madison Ave. New York, N. Y.

Certified DRY MATS

Patents

(*Continued from Page 44*)

flexible and dividing the body into a multiplicity of small pressure-transmitting areas operable when the printing face is imposed upon the surface to be printed and pressure applied to the pressure-transmitting areas to cause such flexure of the printing-surface zone as to insure uniform impression of the design upon the surface of the glass and to avoid unequal pressure upon the glass which would be likely to cause it to fracture.

2,065,690. MULTICOLOR STAMPING MACHINE. Herman Gould, Brooklyn, and Frank Ackerman, New York, N. Y. Application January 30, 1936, Serial No. 61,520. 11 Claims. (Cl. 101—193.)

1. A stamping device comprising two spaced dies, a platen for supporting articles to be impressed by the dies, means for alternately moving the dies into and out of impressing relation to the platen and means for reciprocating the platen for alternately presenting a part thereon into registering relation with the dies.

2,066,566. PROCESS OF WINDING AND CUTTING PAPER INTO SIZES. Einar Henrik Janson, Amotfors, and Johan Olof Naucler, Stockholm, Sweden. Application April 30, 1935, Serial No. 19,042. In Sweden May 1, 1934. 5 Claims. (Cl. 164—17.)

5. A process for cutting lots of different kinds of paper to size on a machine capable of simultaneously cutting a plurality of sheets, comprising the steps of making up a number of similar rolls of paper equal to the maximum capacity of the cutting machine, winding onto each roll in similar sequence portions of the different kinds of paper, each kind of paper being equally distributed among the rolls, and feeding paper simultaneously from all the rolls to a cutting machine, whereby the different kinds of papers are cut to size in inverse sequence to the initial winding onto the rolls.

2,069,209. DYESTUFF PASTE FOR USE IN PRINTING. George M. Bishop, Buffalo, N. Y., assignor to National Aniline & Chemical Company, Inc., New York, N. Y., a corporation of New York. No Drawing. Application November 7, 1929, Serial No. 405,532. 11 Claims. (Cl. 8—6.)

1. As a composition of matter, a dyestuff paste comprising a dibenzanthrone dyestuff and a hydroxyalkyl ether.

2,069,210. FLAVANTHRONE DYESTUFF AND PRINTING PASTE. George M. Bishop, Buffalo, N. Y., assignor to National Aniline & Chemical Company, Inc., New York, N. Y., a corporation of New York. No Drawing. Original application November 7, 1929, Serial No. 405,532. Divided and this application February 21, 1936, Serial No. 65,065. 10 Claims. (Cl. 8—6.)

1. As a composition of matter, a dyestuff paste comprising a flavanthrone dyestuff and a hydroxy alkyl ether.

2,069,215. PRINTING PROCESS AND COMPOSITION THEREFOR. Ivan Fleming Chambers, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware. No Drawing. Application August 18, 1934. Serial No. 740,455. 14 Claims. (Cl. 8—6.)

1. In a process of printing textile fibres with vat dyestuffs, the improvement which comprises applying the dyestuff to the fiber in the presence of an alkali-soluble salt of a branched-chain aliphatic carboxylic acid containing not less than 6 and not more than 12 carbon atoms.

2,069,828. PRINTING INK. Herbert A. Hauptli, Evanston, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York. No Drawing. Application February 15, 1935, Serial No. 6,642. 10 Claims, (Cl. 134—17.)

1. Ink having a basic material derived from rubber by the action therewith of an amphoteric metal halide compound, a color material having an affinity for the basic material to permit dispersion thereof in the material, and a volatile oil-free non-oxidizing vehicle.

2,070,206. METHOD OF AND APPARATUS FOR SUPPLYING INK TO PRINTING PRESSES. Joseph Edward Hudson, Baker, Oreg. Application November 13, 1934, Serial No. 752,890. 16 Claims. (Cl. 91—67.4.)

1. Apparatus for supplying liquid ink to the inking surface of a printing press or the like comprising a liquid ink cartridge, a dispenser having a closed chamber for receiving the cartridge, means for applying pressure to the ink in the cartridge, an ink spreader secured to the dispenser, and means for optionally discharging the ink in regulated amounts from the spreader.

2,070,278. PRINTING INK. Eugene J. Kelly, Kalamazoo, Mich. No Drawing. Application May 20, 1935, Serial No. 22,437. 10 Claims. (Cl. 134—36.)

7. A printing ink which is quick drying at a temperature range from 150 deg. F. to 325 deg. F., consisting of coloring matter, 3% to 18% by weight of a cellulose ester of the group, consisting of nitrocellulose and cellulose acetate ranging in viscosity from one-fourth second to forty seconds, 1% to 50% of a resin from the group consisting of oleo resin esters and alkyd resins, and 40% to 90% of a glycol derivative from the group consisting of the esters and ethers of ethylene glycol and diethylene glycol.

2,070,467. PRINTING COMPOSITION AND PROCESS. Ivan F. Chambers, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware. No Drawing. Application May 9, 1934, Serial No. 724,833. 19 Claims. (Cl. 8—6.)

14. A printing paste comprising a dispersed water-insoluble vat dye, a reducing agent which is adapted to reduce the dye to its leuco derivative on heating, and a dispersion of a white, water-insoluble organic pigment selected from the class consisting of organic ethers containing more than one closed chain connected by an ether linkage, and —S—, —Se—, —Te— and —NH— analogues thereof, the ethers and analogues thereof existing as solids at temperatures above 100 deg. C. under the conditions of printing.

Platemaking:

2,064,850. PLATE STRAIGHTENER. Frank T. Powers, Glen Cove, N. Y. Application January 28, 1932, Serial No. 589,399. Renewed June 1, 1936. 3 Claims. (Cl. 153—54.)

1. A device for straightening photo-mechanical printing plates, comprising in combination three or more parallel rotatable cylindrical rollers, successive rollers being positioned on opposite sides of the path of travel of the plates, a portion of them being entirely on one side of a plane and the remainder predominantly but not entirely on the other side of the same plane, means for varying the position of a portion of the rollers, travelling means for conveying the plates between successive rollers, and means for rotating the rollers at a peripheral speed equal to the speed of the plate.

2,066,890. PHOTOCOMPOSING MACHINE. Alexander T. Koppe, Hasbrouck Heights, N. J., assignor to General Printing Ink Corporation, New York, N. Y., a corporation of Delaware. Application July 18, 1935, Serial No. 31,987. 14 Claims. (Cl. 95—76.)

1. In combination, means for supporting a sensitized member in a vertical plane, means for supporting a printing member in an adjacent vertical plane, means for effecting relative movement between the sensitized member and the printing member while the members are maintained in spaced relation with respect to each other, means forming a vacuum chamber

A NEW FEATURE . .

FOR ROTARY PRESSES

HOW many times have you and your readers been annoyed by unevenly folded papers? You hesitate to put them on the street and you can't afford to throw them away — a dilemma! This annoyance is now of the past.

THE Duplex folder is now equipped with a quick fold centering device consisting of a patented means of adjusting the folder blades from outside the press at full running speed to produce a uniform half page fold without disturbing the pin-point mechanism or the point of cutting. It insures parallel alignment at all times.

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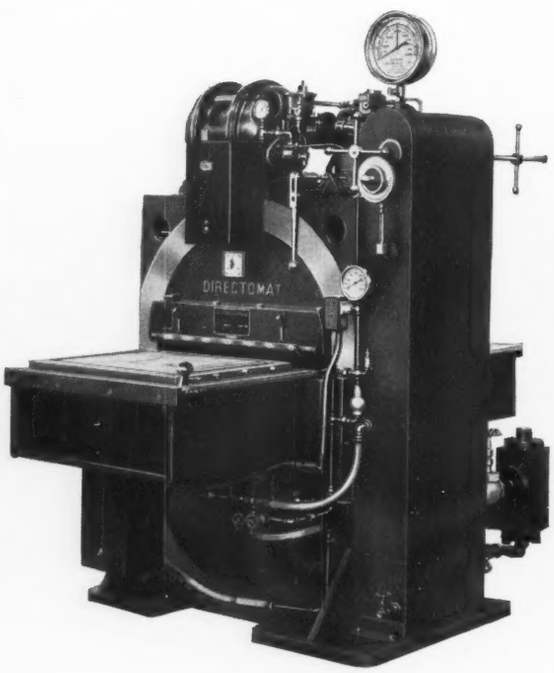
● This superiority is based on greater speed, better and more consistent moulding results, greater reliability and all-round efficiency.

● When concerns like Hearst Newspapers, Western Newspaper Union, Atlantic Electrotype & Stereotype Co., New York, Northern Electrotype Co., Detroit and Rapid Electrotype Co., Cincinnati, place repeat orders for DIRECTOMAT Presses, **they know** that it is the finest and most efficient matrix press on the market, regardless of price.

● One DIRECTOMAT sells another. Over forty of these silent salesmen are now installed in 27 cities.



The DIRECTOMAT
is suitable for dry mats (cold moulding) and wet or plastic mats (hot moulding).

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Lake Erie Stereotype Equipment Corp.
Division of Lake Erie Engineering Corp.
Kenmore Sta. Buffalo, N. Y.

within which the sensitized member is entirely enclosed, and means for effecting relative movement between the sensitized member and the printing member to bring them into contacting relation.

2,067,190. PRINTING PLATE THINNING AND SHAVING MACHINE. William F. Huck, Richmond Hill, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York: Irving Trust Company, permanent trustee. Application February 2, 1932, Serial No. 590,352. 18 Claims. (Cl. 29—21.)

15. In a device of the kind described, the combination of a rotating member, means secured to the member for shaving curved stereotype plates, a second member rotatably and eccentrically mounted on the first mentioned member, the second member having means fastened thereto for thinning the stereotype plate, a power shaft concentric with the first mentioned rotating member and positioned substantially at one end thereof, gear means operatively connecting the shaft with both of the members, and a single housing wherein the gear means and the shaft rotate.

2,069,001. METHOD OF AND APPARATUS FOR PREPARING PRINTING SURFACES. Ernest S. Ballard, Berkeley, Calif. Application February 25, 1935, Serial No. 8,197. 20 Claims. (Cl. 101—401.1.)

1. A method of preparing a printing surface by use of an apparatus embodying an elastic transfer member which comprises the steps of applying a transfer coating on a master surface bearing the desired image, bringing the surface of the elastic transfer member into contact with the master surface by the direct application of fluid pressure thereto to cause a uniform simultaneous transfer of the entire coating to the surface of the elastic member, separating the surfaces and thereafter bringing the surface of the elastic member carrying the transferred image into contact with the surface to be prepared by the direct application of fluid pressure thereto to cause the uniform simultaneous transfer of the coating substance to the printing surface.

2,068,268. TRANSFER COMPOSITIONS AND THE PRINTING THEREOF. Frederick George Francis, Leyton, London, England, assignor to Caribonum Limited, London, England, a company of Great Britain. No Drawing. Application October 16, 1931, Serial No. 569,266. In Great Britain May 23, 1931. 11 Claims. (Cl. 91—68.)

1. Method of producing non-smearing pressure-transferable colour coatings on paper surfaces which includes coating the surface in the cold by printing methods with a composition comprising a substantially non-volatile substantially non-drying oily base, including diaceto glyceryl abietate in an amount sufficient to function as an extender, at least one wax in finely divided suspended form and colour components, heating the coated surface to cause a fusion of at least one of the suspended waxes and cooling the heated surface rapidly.

2,069,248. STEREOTYPE PLATE CASTING MACHINE. William F. Huck, Richmond Hill, N. Y, assignor by mesne assignments, to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application June 11, 1932, Serial No. 616,653. 24 Claims. (Cl. 22—2.)

17. In a printing plate casting machine, the combination of metal supplying means, a horizontal semi-cylindrical casting chamber, and means for supplying metal to the chamber along a line parallel to the axis of the casting chamber and extending throughout the length of the chamber intermediate its side edges at the lowest portion of the chamber so that the metal flows in opposite directions and upwardly from the axial line in filling the chamber.

2,070,293. MATRIX MAKING MACHINE. John D. Morgan, Summit, N. J., and Hobart N. Durham, Munsey Park, N. Y., assignors to The Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Application May 13, 1935, Serial No. 21,102. 5 Claims. (Cl. 101—12.)

1. A matrix rolling machine including in combination a form supporting bed, means for supporting and progressing the bed, a cylinder for pressing a flong against the surface of a form on the bed, means for driving the cylinder, and means governed by the driving means for indicating variations in pressure exerted on the flong as it moves beneath the cylinder.

2,070,328. MULTIPLE STEREOTYPE CASTING MACHINE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application May 26, 1932, Serial No. 613,668. Renewed December 30, 1935. 17 Claims. (Cl. 22—2.)

1. In a casting machine, the combination of a curved back movable laterally and a rotatable core having a plurality of casting surfaces thereon for alternate cooperation with the back, the radii of the surfaces being greater than half the width of the core at the same point.

2,070,438. STEREOTYPE MOLD. Torbjorn C. Korsmo, Madison, Wis., assignor to Madison-Kipp Corporation, Madison, Wis., a corporation of Wisconsin. Application January 12, 1935, Serial No. 1,575. 14 Claims. (Cl. 22—5.)

13. The combination in a stereotype die of a pair of coacting die parts; means adjustably mounted on one of the die parts for clamping a matrix thereon along all except one edge thereof; and means on the other die part clamping the remaining edge of the matrix to the first-mentioned die part when the die is closed.

Printing Presses:

2,068,707. PRINTING PRESS. Harvey J. Reardon, Chicago, Ill. Application March 14, 1935, Serial No. 11,127. 3 Claims. (Cl. 101—269.)

1. In a hand printing press, of the bed and cylinder type, the combination of: a bed; a carriage movable over the bed; the carriage including the following parts: a supporting frame including upright end walls and an impression roll or pressure cylinder carried thereby; bearings rotatably journalled in the end walls of the frame and having the impression roll eccentrically journaled therein, for raising and lowering the impression roll relative to both the bed and the carriage itself; a row of teeth carried by at least one of the end walls of the frame; a shaft extending between the end walls of the frame and having end portions rotatably journaled in the bearings; a latch member carried by the shaft and cooperating with said teeth to latch the impression roll in either raised or lowered position; and a handle carried by the shaft for moving the same in a direction to move the latch member carried thereby out of latching engagement with the teeth.

2,068,839. SEAL FOR INK HOUSINGS OF PRINTING PRESSES. Alfred Behringer, Corona, N. Y., assignor to Speedry Gravure Corporation, New York, N. Y., a corporation of New York. Application September 9, 1935, Serial No. 39,717. 15 Claims. (Cl. 101—157.)

1. In combination with a housing for a printing cylinder, a doctor and a cylinder end seal mounted on the housing, and means exteriorly of the housing and between the doctor and end seal to seal the end seal to the doctor to prevent the escape of the volatile ingredients of ink from the housing.

2,069,459. FLAT BED PRINTING MACHINE. Ian Theodore Nelson, Edinburgh, Scotland. Application November 22, 1934, Serial No. 754,354. In Great Britain November 6, 1934. 1 Claim. (Cl. 101—386.)

For a printing machine having a flat bed presenting undercut guideways, a plate-clamping device adapted to be interposed between a pair of spaced printing plates deposited on the bed transverse to the guideways, the plate-clamping device comprising a pair of plate-engaging clamps each formed with a depending cylindrical neck portion entering a guideway and of a diameter less than the width of the guideway, and diametrally opposed shoulders at the base of the neck portion, the extremities of the shoulders being spaced from one another a distance greater than the width of that part of the guideway entered by the neck portion, the neck portions being formed with transverse apertures of circular cross-section, a strut spindle penetrating the apertures, the spindle provided with a fixed collar affording an abutment for one of the clamps, and a nut-forming member threaded on the spindle and affording an abutment for the other of the clamps.

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3. High speed gripper mechanism.
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Results

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Emil Tausig, Foreman
Photo Gallery

R. H. Christman, Foreman
Retouching Department

John A. Spring, Foreman
Etching Department

Leslie J. Newmeyer,
Pressroom Foreman

Roto Plant

(*Continued from Page 46*)

Ballard Process

The new Ballard plating process installed in the plant permits plating and polishing cylinder blanks in two and one-half hours. By the method formerly used, eight hours were required for polishing cylinders. The cylinder itself consists of a steel forging which has been nickel-plated. A coating of oil is applied to the cylinder surface previous to mounting it in bearings in the plating tank. During the plating operation the cylinder is rotated continuously. The plating mechanism is stopped automatically at a predetermined time or in other words when enough copper has been deposited on the cylinder to allow for polishing, after which the coating is 0.006 in. thick. When the cylinders have been returned from the pressroom the copper is stripped off before the cylinder is again placed in the plating tank.

Etching Department

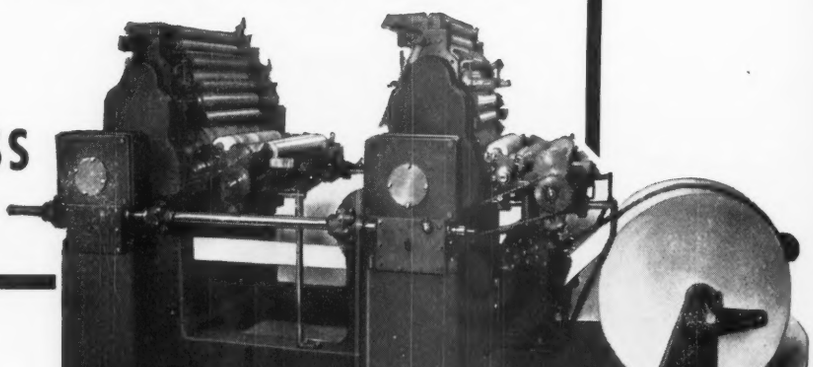
The etching department, where the etching operation is affected acutely by heat and humidity, is equipped with Offen air conditioning equipment which maintains the temperature constantly at 72 deg. F. and the humidity at 50 deg.

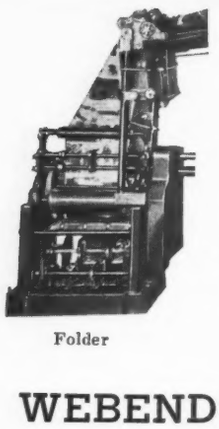
The Pressroom

The pressroom is modern in construction. Its ceiling rises two stories above the floor. No supporting columns

WEBENDORFER

OFFSET WEB
NEWSPAPER PRESS





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Builders of Printing Machinery for Over Thirty Years

obstruct the placing of the pressroom equipment. Provision has been made in the floor construction for the future installation of two ten-unit presses of the same type as the new Hoe color rotogravure press recently placed in operation.

This new Hoe press consists of five units so arranged as to permit printing four colors at a time—monotone on one side of the sheet and four colors on the reverse side.

The new press is equipped with Offen drying and ventilating system, which doubles its speed by drying the ink as fast as the papers are being printed. Enclosed ink fountains permit the use of high-speed inks for fast press operation. Special ventilating equipment has been installed in the pressroom for the comfort of the workers.

The Hoe color press will deliver 40,000 monotone eight-page papers or 30,000 papers in two or more colors per hour.

Besides the new color press, three other presses form part of the pressroom equipment. These consist of a Webendorfer newsprint with folder, a Webendorfer monotone with flat delivery and a Hoe Monotone press with newspaper folder.

A Hoe flat delivery press for commercial printing, which will handle sheets up to 57 in. by 74 in., is to be added in the near future. The design of the press will be such that at least three new units can be added at a later date.

NEW MATRIX COMBINATION

"Many printers have been using the Excelsior and Memphis families together in many forms of commercial printing and publication work—Excelsior for body matter, and Memphis Bold for heads or other forms of display," says C. H. Griffith, vice president in charge of typographic development with the Mergenthaler organization. "We are manufacturing Excelsior with Memphis Bold in the full range of two-letter sizes," says Mr. Griffith.

HERE is a brief showing of the 10 point size of Linotype Excelsior with **Memphis Bold.** Modern man cannot be served **by any tool that is just as good** or a little better than pretty

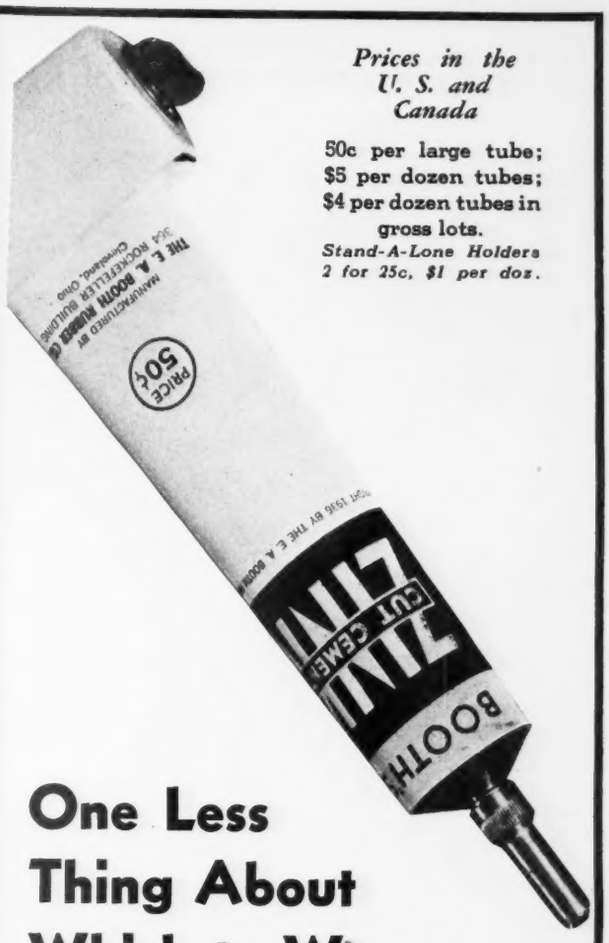
Electric Counters

Struthers Dunn, Inc., electrical control specialists, have made availabel recently a new line of electric counters. These counters are available with five digits in either the reset or non-reset types.

The construction of the counters is such that the load on the operating mechanism is constant regardless of the number being counted. This is accomplished by gearing the indicating wheels together, the same as is done in a watt hour meter. With this type of construction, it is claimed, an accurate and dependable counter has been developed. The duty on the operating mechanism is practically the same as on a relay since the load is the same whether No. 1 or No. 10,000 is being counted. This eliminates any tendency for the counter to skip when only one or two wheels should be turning and miss when all of the wheels should be turning. Only one number appears on the dials at a time.

Complete information about these counters may be obtained by writing to the Struthers Dunn, Inc., or in care of *Printing* EQUIPMENT *Engineer.*

P-Double-E File No. 1H.



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50c per large tube; $5 per dozen tubes; $4 per dozen tubes in gross lots.

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Placing cuts on bases as indicated in the original copy is assured by using Booth's Zink Cut Cement. Then you can forget all about them in the rush of getting to press. This cement just naturally anchors cuts of all kinds to wood or metal base.

Constant diameter throughout entire length, resiliency, glove-like fit on the shaft, camrotating power without respect to room temperature are some of the qualities to be found in Booth's Green Rubber Keyboard Rolls, Crepe Finish or Corrugated Tread—as you choose. $1.30 per pair. $7 per dozen; 55c each in lots of 100.

The E. A. **BOOTH** Rubber Co.

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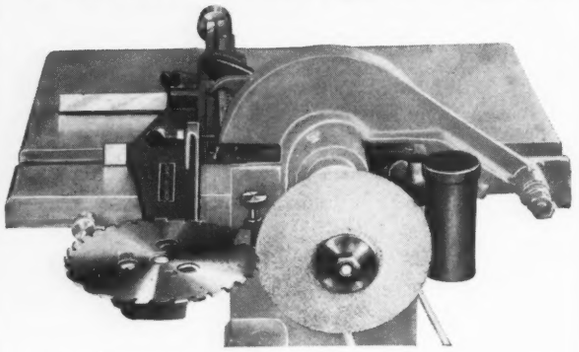
C & G Universal Saw Blades



Exclusive for C&G Saw Trimmers. Developed and patented to eliminate need for changing saws when cutting hard materials. Many printers now using them. Illustration shows this blade in position for sharpening.

C&G TRIMMER KNIFE GRINDER

Definitely positions trimmer knives for grinding and assures proper cutting angles while sharpening.

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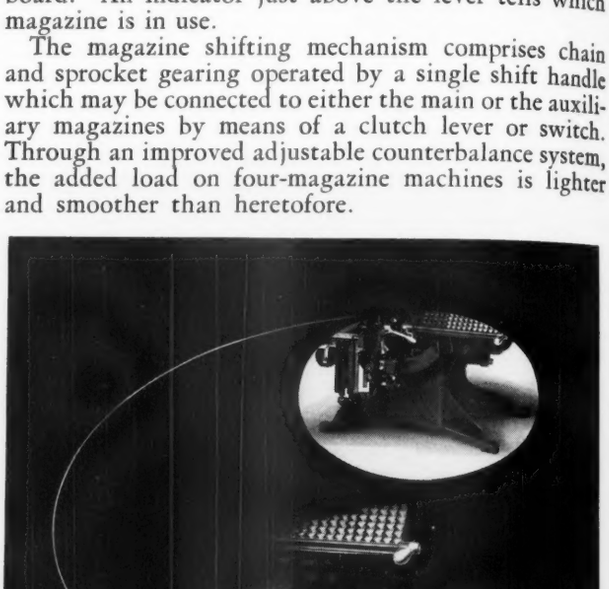
New Intertypes

(Continued from Page 34)

zines cannot be dislodged accidentally from the carriages either when in the stack or when extended at the front.

To shift from one main magazine matrix font to another on mixer machines a lever is provided at the left of the main keyboard. A similar lever for the side magazines is provided at the left of the side keyboard. An indicator just above the lever tells which magazine is in use.

The magazine shifting mechanism comprises chain and sprocket gearing operated by a single shift handle which may be connected to either the main or the auxiliary magazines by means of a clutch lever or switch. Through an improved adjustable counterbalance system, the added load on four-magazine machines is lighter and smoother than heretofore.



Pedestal base of new Streamlined Intertype weighs 90 lbs. more than the old-style base shown in the insert.

On the new Intertype four-magazine side unit, each magazine has its corresponding stub (upper section). This makes it possible to fill any and all magazine channels with twenty matrices, instead of eight.

Two-letter 18 and 24 point matrices reduce the number of magazines needed and provide increased type-face capacity in each magazine.

Two-letter 18 and 24-point matrices are assembled in the regular lower-rail position. The casting position is determined by the first elevator alignment stop bar as used on all Intertypes.

ALEMITE CATALOG

The Alemite Division of Stewart-Warner Corporation has just published its 1937 industrial catalog, "Alemite Controlled Lubrication." The introduction calls it the "Show Book of the Alemite Systems," and in 56 pages are presented the entire range of Alemite's industrial equipment consisting of hand guns, power-operated units, fittings, hose, valves, meters, etc., including a complete section of hand-gun repair parts to simplify ordering of parts for Alemite equipment.

The book is printed in two colors, and is profusely illustrated with photographs, drawings and diagrams. For a free copy of "Alemite Controlled Lubrication," send your request to Stewart-Warner Corporation, 1826 Diversey Parkway, Chicago, Illinois.

Air Conditioning

(*Continued from Page 21*)

with the printing job, then we would not need to consider the matter of conditioning the atmosphere in respect to its water content. But they do make a difference. The paper becomes wider and longer, or else it shrinks in width and length; and the cherry blocks become thicker or thinner. As to the paper, it becomes, in addition, more absorbent or less absorbent, with respect to the ink. I do not press on and go into details as to effects upon the ink itself and upon the material of the inking rolls.

Let us fix our attention upon the atmosphere as it affects paper and block. When paper or block gives up water to the air, the last naturally gets wetter. The paper or block at the same time becomes dryer. In short, paper and block have effect upon the air just as well as the air has effect upon them. But, practically, the air is so great in relative amount that we are really justified in disregarding the slight changes brought about in the air, and in confining our attention to the variations produced in paper and block. Consequently, we speak of the atmoshpere as drying or moistening the other things.

Clothes hung out to dry become dry because the air absorbs moisture from them. If the air contains nearly its maximum of moisture, it will have but little drying power, and the clothes will be a long time in getting dry. Similarly, with paper stock. The reason it gives up moisture is that the surrounding air absorbs. It is not because it is a warm day. Hot day or cool day, the paper will dry if the atmosphere has less than its quota of water. And the drying will continue until that quota is complete. You can increase the drying power by heating the air, because the quota increases as the temperature goes up. The warmer air has consequently a better drying power. Otherwise, the temperature seems to have nothing to do with it. Similar remarks to the foregoing may be made in connection with the reverse operation when the atmosphere gives up moisture and produces a humidifying effect upon block and stock. They are stronger in absorbing than the air is in retaining water. So, they get wet.

The air controls the situation because of its great quantity. So then, if paper or block is too dry, all you have to do to correct this condition is to provide the exactly right relative humidity, in the air, and leave things alone. After a time, block or paper will come to the right level. It is easy enough to provide moisture for the air. All you have to do, for example, is to bring in steam. But when it comes to supplying just the right amount automatically and to do it in such way that the right amount will be maintained no matter how the weather changes in respect to humidity—why, that is quite another matter. So much in respect to adding humidity.

Subtracting humidity is a very different job. Nevertheless, it can be done. One way—and perhaps it is the simplest—is to raise the temperature. This does not exactly take water out, but it does do the equivalent from the point of view of drying. It decreases the relative humidity by increasing the capacity to hold moisture. In an emergency, this method may be followed in the pressroom. That is to say, for example, the weather conditions may become too damp and it may be in-

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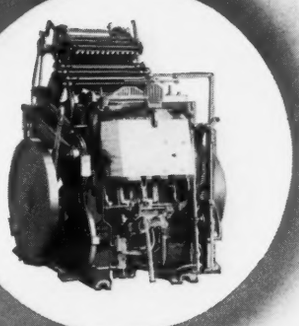

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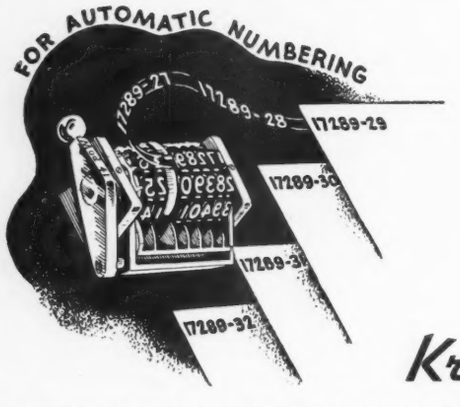

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convenient or impossible to wait for a change in the natural humidity. Naturally, this situation may occur in the summer time. At any rate, whatever the season, it may be possible to raise the temperature enough to increase the drying power of the air sufficiently to go ahead with the job.

It is, of course, better to have the whole matter in control. Equipment is necessary for this. Two purposes are, or should be, provided for in the humidity control plant: (1) Facilities are required for the purpose of getting water out of the atmosphere and (2) Automatic control apparatus should be provided, for the purpose of stopping the withdrawal of moisture at just the right junctures.

There are two principal methods, at least, for the reduction of the water content of the atmosphere. Both are effective, and the underlying principles are matters of interest in both cases. I am assuming that the reader will welcome brief scientific statements. The one method proceeds by refrigerating the air. As the temperature falls, the capacity of the air to hold moisture decreases, until finally the atmosphere is barely able to hold whatever moisture was in it at the beginning of operations. The relative humidity will now be at 100 per cent. If you go any further with the refrigeration, water will drop out. We have started a rain. By simply going low enough with the temperature, it is possible to reduce the absolute amount of water to just the right amount. If the de-humidified air is now warmed up to the point desired, we will have air at just the right temperature and with just the right content of moisture. The refrigeration of the air may be accomplished by passing it through a spray of chilled water. The moisture emerging from the air joins the other water and may be thus disposed of. To use this method of dehumidification, it is necessary to have means of refrigeration, or else a supply of sufficiently chilled water. Sometimes, Nature will furnish the water at a temperature low enough to meet the requirements of the printing plant. At other times, the water will be cool though not cool enough. Even so, this will lessen the expense of refrigerating it.

The second method of removing water from the atmosphere utilizes the adsorptive power of certain substances. Such a substance may be of a granular character and in fact resemble grains of sand. Or, the adsorbing material may be a liquid. The Waverly Press, already referred to, employs the granular material.

Perhaps it is not too much to say that the major technical requirements of a printing plant are largely covered when the air conditioning plant provides for both humidification and de-humidification by automatic means.

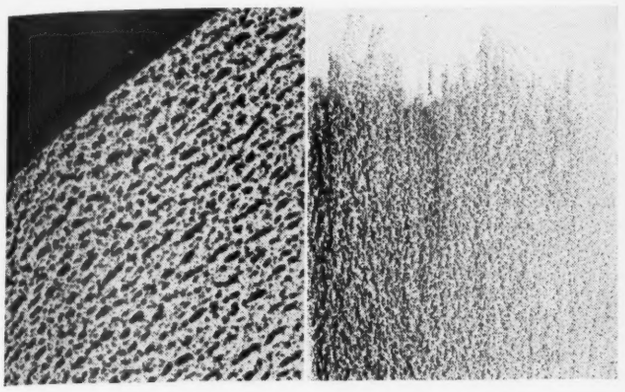
Cooling in summer and warming in winter are air conditioning features, and their employment in a printing plant operates to produce an atmosphere in which men work well and willingly. Even if the printing can be done, despite a cold or a hot atmosphere, it seems much better, even from a money-making point of view, to keep the workmen vigorous, alert and happy as really good men are apt to be when they work in a comfortable atmosphere. Moreover, wrong temperatures may affect ink, rollers, etc., as well as workmen. Where a printing plant just does not have the money to put in complete temperature control for summer use, it is often more or less satisfactory to provide for dehumidification, *as warm air is frequently comfortable for human beings if the humidity can be kept down.* But, more of this at another time.

What Is It?—V.

(*Continued from Page 26*)

stone. The gum cover prevents the crayon or tint from holding, for wherever the ink or crayon overlaps the gum, the grease fails to hold onto the stone's surface.

Mechanical shading machines were invented by Ben Day, the method being commonly named after him. The device consists of two anchors which hold a gelatine screen firmly in position so it may be removed and replaced in exactly the same position. The gelatine screen is stretched tightly upon a wooden frame. It has the dots, making up its design, raised above its surface.



A B

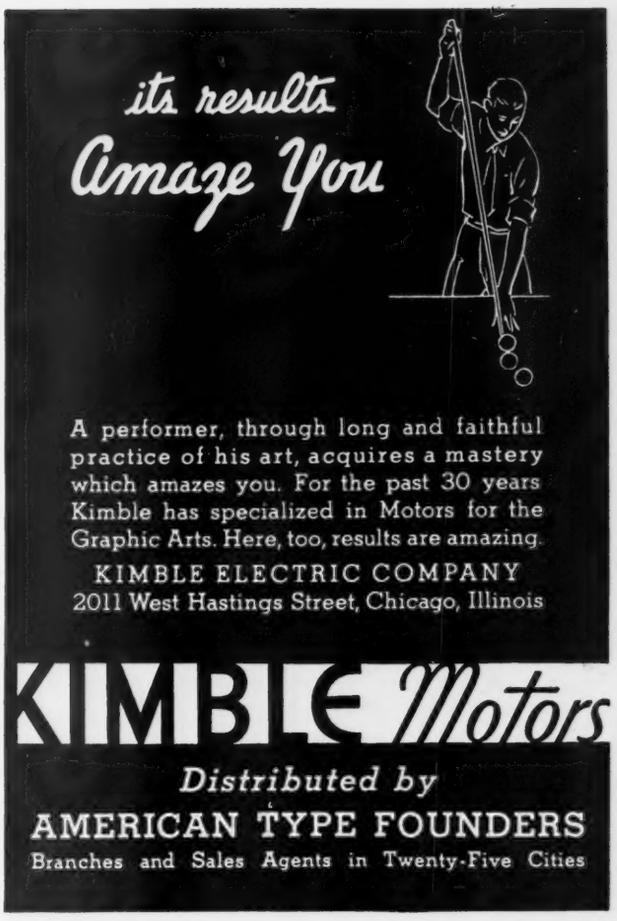
Fig. 13—The two blocks shown above represent two different crayon tints. *A* represents a poster tint on a rough-grained plate. *B* shows a finer grain result for small work and smoother grain. The same effects may be achieved on stone, metal or sketchboard.

These are rolled up with a greasy ink. The frame is then inserted face down in its holder between the two anchors and placed on the stone or plate. The ink is then transferred from the gelatine to the surface of the stone or plate by rubbing and applying pressure to the back of the screen. Figure 11 depicts one kind of portable apparatus used in mechanical shading. Many gradations and shades may be worked by varying pressures applied to the back of the screen. Figure 12 shows a few of the dot and line arrangements that may be produced by the machine method.

The Finish Operation

When all of the hand work has been completed and the subject has been read over and checked, the work is powdered with chalk or talcum and etched. If stone, the etch merely consists of gum arabic and nitric, in strong enough combination to cause the surface to repel ink. If the medium used be aluminum, then the gum arabic-phosphoric acid compound works the best. Should the metal be zinc, a number of workers prefer chromic acid to any other form of etch. This is, of course, mixed with gum arabic. But because of its dangerous effects on the skin, this as well as bichromate is taboo with most workers. Probably the best form of zinc etch is that composed of the salts of ammonia in combination with gum arabic.

In all of the etches it will be noted that gum arabic plays a leading part. Stories to the contrary, gum arabic still remains the most effective factor in the etch.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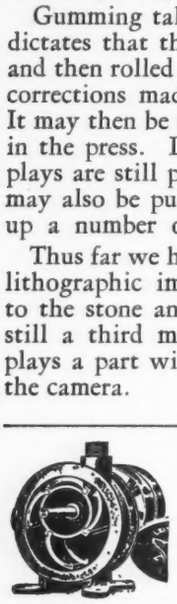
Leave out the gum arabic and the etch will be anything but satisfactory.

Gumming takes place after the etch. Best procedure dictates that the work be washed out with turpentine and then rolled up. Tint strengths may then be altered, corrections made and a final etch given to the work. It may then be used for transferring purposes or directly in the press. Large poster work, labels and some displays are still produced in this fashion. Small subjects may also be pulled by the transferrer and then stepped up a number of times onto the press-plate.

Thus far we have taken up two ways of producing the lithographic image, engraving and hand work direct to the stone and plate. The next article will develop still a third manner in which the engraver or artist plays a part with his hand work in combination with the camera.



THE SUCTION THAT LIFTS THE PAPER IN ALL SORTS OF FEEDERS

They are also used for blowing to loosen up sheets of paper on a pile feeder, and we have strainers to prevent oil from spraying on the sheets.

The printer also uses these pumps for cooling linotype molds and for blowing dust out of the working parts of machines and out of type cases.

The electrotyper uses the air for agitating his plating solutions, and these pumps are found in almost every plant doing this work. All sorts of shops use them for all sorts of air using devices.

IDEAL FOR VACUUM PRINTING FRAMES

In the big shops, especially in the newspaper plants, these pumps operate the stereotype furnaces creating high heats with gas or oil as fuel.

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Flood

(*Continued from Page 32*)

All of the motors in the stereotype department were under water. In the pressroom the water was over half way up on the folder. I immediately ordered new press blankets but they did not arrive in time, so we dried out the ones that were on the press and put them back on. We are still printing on them. We used kerosene and compressed air to blow out the bearings on the press. The ink fountains, which were full of water, were taken apart and cleaned. The ink tank was also filled with water, which we dipped off the top, and used all of the ink.

We have not experienced any delays due to mechanical trouble. I might mention we did not use any outside help except three electricians and one plumber.

Post-Flood Difficulties

To demonstrate that production difficulties were not terminated in the Louisville area with recession of the flood waters and to give some idea of the problems arising because of dependence on emergency power sources, we are quoting Mr. Corcoran's description which was written on February 19. The statement is as follows:

We have been having some post-flood difficulties. The Louisville generating plant is flooded and the city is getting power from Cincinnati, Indianapolis and Dix River Dam in Kentucky. For some reason or other, power plant executives are unable to keep up the voltage. We should get 235 volts at our plant, but last Monday when we attempted to run three presses, as we do on our afternoon paper, the voltage ran 190. The controls would not operate promptly and it was necessary to station a man at the boards to push in the contacts. We had considerable trouble with the motors heating. We placed electric fans on the motors and stationed a man at each motor. When he felt that it was becoming dangerously hot, he would have the press stopped.

Power company executives have told us this condition will exist until they can get the Louisville plant in operation again. Since Monday (Feb. 15) we have moved up the times of our editions and are running only one press. Three presses are plated and run in rotation. If one motor heats up, we stop that press and start the next one.

We are without passenger elevator service and it is necessary to use the steps to reach the upper floors. Fortunately, we have only four floors in this building.

SALE OF EQUIPMENT

The Brooklyn *Eagle* took over publication of the *Times Union* on February 1st. The *Times Union* plant, however, was not included in the transaction. An Auction Sale will be held Tuesday, April 6. All machinery and equipment of the *Times Union* except the presses and a portion of the stereotype equipment will be included. Equipment to be offered consists of 28 Intertypes, casters, proof presses, steel furniture, over thirty tons of linotype and stereotype metal and the complete fleet of delivery trucks.

Sale will be held under management of Samuel T. Freeman & Company, 27 William Street, New York, N. Y., from which firm catalogs can be obtained.

The Toronto (Ont.) Canada *Globe and Mail* has placed an order with R. Hoe & Co., Inc., for a new 12 Unit Hoe Arched Type Super-Production Press with 3 Hoe Super-Production Double Former Folders for installation in the new plant which is now under construction. The 12 units are to be arranged all in one line, mounted on an extra heavy cast iron substructure for underneath roll feed and will be equipped with Hoe Three-Arm Reels, Electrically-Controlled Automatic Tension Devices and Hoe High-Speed Pasters.

In line with the recent trend of numerous Publishers to install more modern productive equipment, the Miami, (Fla.) *Tribune* recently placed an order with R. Hoe & Co., Inc., for a new 5-Unit Hoe Arched Type Super-Production Press, with a new Super-Production Double Former Folder and Color Printing Attachments.

Cost Control

(*Continued from Page 18*)

newspaper. It should not be so low as to be impossible of attainment, neither should it be so large as to be easily attained. It should be a happy medium. It should reflect the actual experience of your newspaper.

If the foreman's payroll for the day were only $85 then he would have a favorable balance of $10; were it $100.00 then he would have an unfavorable balance of $5. It is a good idea in the operation of this system to pay the foreman a bonus or some percentage of the favorable balance (if one exists) at the end of the year. It gives him an incentive to hold down expenses.

It is a fallacy to set Standard Costs at too low a figure. It will break down the morale of your force. It is much better to have them high enough that they can be met and even lowered.

Cost Centers

In the use of this system it is necessary, for costing purposes, to divide the composing room into three cost centers:

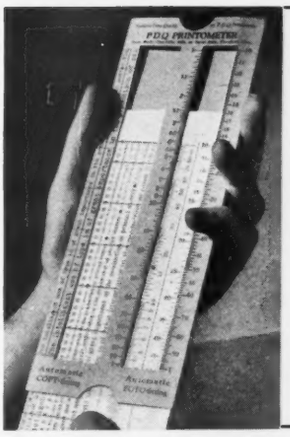
1. Advertising
2. News composition
3. Makeup

The foreman's labor allowance for the day is calculated according to the amount of matter to be produced that day and not according to the content of the day's edition or editions. Much of any newspaper is set in advance of the date of issue. Therefore, the labor of the day cannot be calculated by the issue of the day.

Finding Costs of Any Issue

Either of two methods may be used to find the actual cost of any given issue, if it is so desired, but so far as controlling labor expense is concerned it is not necessary. First, all matter may be charged to the bank and credited as the matter is withdrawn and used, or Second, you may find the average cost per inch of each classification and use these figures as multipliers applied to the totals of each class contained in any given edition. I think the better way is to value your bank according to the second method at the end of the month, subtract this from the total labor cost of the month and divide the remainder by the number of pages issued. This gives an accurate page cost for the month. The difference between this figure and the allowed page cost gives the plus or minus efficiency page rating.

Another angle to be taken into consideration in calculating the required labor for the day is the elapsed time



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Justrite Safety Cans—The safe way to handle volatile fluids; 7 sizes: 1 pint to 5 gallons.

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MACHINE KNIVES
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WORCESTER MASS. U.S.A.

between starting time and the hour at which the forms close for the first edition. The number of column inches to be produced should be known and provision made for their production.

After this system has been in use in your plant only a short time you will find that it will run smoothly and with little effort and expense. By banking advance matter according to dates it is to run, you can find instantly the amount for the edition and subtract it from the total required which leaves the amount to be produced. The advertising department reports the number of column inches to run in the edition and the number of pages to be produced. The total inches of the edition less the advertising gives the news space. This, less advance matter, art, etc., equals news matter to be produced. With a little practice you will be surprised how quickly you can arrive at your requirements.

Guess work is expensive—it pays to know.

You can see from what I have outlined in this article that it all sums up to this: If you keep track of what your men actually produce and apply this knowledge to what you are required to produce on any given day you can keep from under or over-hiring. If you know what each man produces then you should have a competent force giving maximum production. Don't ever guess. Keep written records and weed out the dead-heads who have been getting by because the other fellow did enough work to make up for their inefficiency.

An interchange of the information contained in these efficiency records between the newspapers of any association would be of great advantage to every member in keeping his own costs in line. You will find that the cost of keeping such records in your own office would not be excessive when compared to the savings made.

RECENT HOE PRESS ORDERS

The New Orleans (La.) *Times-Picayune* recently placed an order with R. Hoe & Co., Inc., for a new 6-unit Hoe Arched Type Super-Production Press, with a new Super-Production Double Former Folder, with Double Upper Formers and a Four-Color Printing Attachment.

This press will incorporate all of the latest improvements. It will be mounted on extra heavy cast iron substructure and arranged for underneath paper roll feed and equipped with Hoe Reels, electrically controlled running belt tensions and Hoe High Speed Pasters.

In the four-color printing attachment will be incorporated the latest high-speed features, including crank shaft ink cylinder drives, enclosed gearing, etc. The *Times-Picayune* will be in a position to produce color at full speed without sacrificing regular black page capacity.

To keep abreast of its rapidly increased circulation and with the assurance of continued greater production, the six additional new Hoe Arched-Type 16-Page Super-Production Units to supplement the present Hoe 18-Unit line, have been ordered from R. Hoe & Co., Inc., by the Los Angeles *Times*.

In all of these units will be incorporated the latest improvements, such as Instantaneous Plate Lock-Up, Automatic Pump System of Ink Distribution with crank shaft ink motion drive and sight forced feed lubrication.

The Philadelphia *Inquirer* has ordered from R. Hoe & Co., Inc., a complete new rotogravure plant, including a new Hoe 11 Unit Super-Production Rotogravure Press, with two Hoe Super-Production Single-Former Folders, Reels, Electrically Controlled Automatic Tensions, High Speed Pasters, Offen Drying and Ventilating System and other auxiliary equipment. Included in the equipment are high speed ink fountains with scientific circulating ink supply system, electrically-operated impression arrangement and ventilating and drying system. The eleven units will be installed in two separate lines of five and six units.

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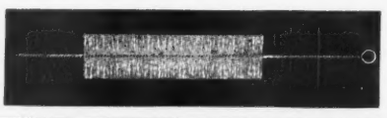
Does away entirely with the greatest source of trouble in the printing plant.



FREE TRIAL OFFER
SEND FOR DETAILS

Western Brush Co., Inc.
175 W. Lake St. Chicago

Technical Literature

for March, 1937

1—*P-Double-E File No. 1G5*—Broadside newspaper page size demonstrates use of Tempo Heavy Italic and Karnak Medium for setting advertisements.

2—*P-Double-E File No. 5EE*—"Stop Loss!" is the title of a twenty-page bulletin containing nearly 50 photographic reproductions with descriptive matter about an offset-preventing gun for use in the pressroom.

3—*P-Double-E File No. 1EE*—Bulletin contains showings of type face series with fonted ornamental material with current allowances for old metal applied against the purchase of new material.

4—*P-Double-E File No. 5AA*—Illustrated folder describes hand oiler which develops 500 lbs. oiling pressure on practically any type oiling fixture or hole on machines used in printing plant.

5—*P-Double-E File No. 1N*—Card illustrates and describes uses to which PDQ Printometer may be put for copy and foto-fitting.

6—*P-Double-E File No. 1U*—Bulletin discusses speed in the use of metal base and explains by way of illustrations and descriptive matter the flexibility of the base being described.

7—*P-Double-E File No. 3E*—"Overnight from Roaring Spring" is the title of a folder describing truck service for Eastern market.

8—*P-Double-E File No. 1G3*—Illustrated booklet describes features and specimens of composition which can be done with the various magazine combinations. Magazines are shown in diagrammatic form.

9—*P-Double-E File No. 1EE*—Slim Black and City, two folders showing ranges of sizes of type faces.

10—*P-Double-E File No. 5U*—"Solving Industrial Crimes" is the title of small booklet showing how graphic instruments may be used to record press speeds, down time, power consumption, voltage and maximum demand.

11—*P-Double-E File No. 5LL*—Broadside, printed in color, illustrates and describes mechanical features of Miehle Horizontal Printing Press.

12—*P-Double-E File Nos. 1W-2G31-2E18*—Folder describes portable router for use by job printers, newspapers, private printing plants, engravers, electrotypers and trade compositors.

13—*P-Double-E File No. 10*—Attractive booklet, "Printing on Reynolds Metal," has just been issued. Printed in black and white on copper, gold and silver Reynolds Metal. Technical information for the printer is presented under four headings as follows: Presses, Plates, Inks, Press Speed and Stock Handling.

14—*How To Distribute Advertising Matter*—Folder explains and instructs the reader how to ship books, plates, matrices and printed matter to the best advantage.

15—*Railway Express Solves My Collection Problems*—Folder describes service offered by the company for out-of-town collections.

16—*P-Double-E File No. 1EE*—"Smash Hit!" is the title of an artistic folder showing several sizes of Cartoon Light and Cartoon Bold.

Printing EQUIPMENT *Engineer*,
1276 West Third St., Cleveland, Ohio.

Gentlemen: please send the literature checked above without obligation.

Name of Company.....

Attention of.....

Department Position .....

Firm St. Address.....

City.....State.....

TINGUE
PRESS BLANKETS
Keep Your Presses Productive! Save Make Ready Time!
TINGUE on Press Blankets guarantees Superior Printing Qualities
TINGUE PRINTING PRESS BLANKETS
are guaranteed to give superior printing
. . . at low production costs . . .
TINGUE, BROWN & CO.
118-120 East 25th St. NEW YORK, N. Y. | 1227 Wabash Ave. CHICAGO, ILL. | 723 East Washington Blvd LOS ANGELES, CAL.

LUDLOWS FOR SALE
I have three modern Ludlow equipments for sale. These machines have all the latest improvements, including electric pots and self-contained water-cooling system and molds, and late style angle top cabinet. Matrix selection includes many new faces. Write for further details on your letterhead. JOS. A. RYAN, 8911 West Chester Pike, Upper Darby, Pa. (near Phila.)

FOR DEPENDABLE MAKEREADY PROTECTION
Buy and Specify
CROMWELL
SPECIAL Tympan PREPARED Paper
QUALITY BUILT IN
THE CROMWELL PAPER CO.
4801-29 S. WHIPPLE ST. CHICAGO, ILL. | 4715 PEARSON PLACE LONG ISLAND CITY, N. Y.

REID LINOTYPE AND INTERTYPE MAGAZINE RACKS
Stock sizes, any size made to order, write us how many magazines to store and what kind and will quote price. Rack Catalog.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

ENS
HEADQUARTERS FOR
STEREOTYPE SUPPLIES
TRY THE BEST
GUMMED PACKING FELT
ALL THICKNESSES
Cut in Strips Without Extra Charge
EASTERN NEWSPAPER SUPPLY
9607 34th Ave. Corona, L. I., N. Y.

NEW—and BETTER Magazines for Linotypes
Top Plate of Duralumin, bottom one of brass and bars and braces of Duralumin. Combines durability of brass magazines with weight saving of Duralumin. Weight only thirty pounds. Price only $100 for full length, $80 for splits. Terms. Sold on approval basis.
MONTGOMERY & BACON, Towanda, Penna.

ROUSE ELECTS OFFICERS

H. B. Rouse & Company, Chicago, manufacturers of labor-saving devices for printers and publishers, recently elected officers as follows: William J. Knoll, President; Harry W. Knoll, Vice President; Walter A. Sittig, Secretary-Treasurer and General Manager.

H. B. Rouse & Company was founded by Harry B. Rouse in 1898. In 1903 a partnership was founded by William J. Knoll and Mr. Rouse. In 1906 H. B. Rouse & Company was incorporated by H. B. Rouse, William J. Knoll and Walter A. Sittig.

William J. Knoll was Vice President in charge of production. During recent years he was service director and assisted with the sales.

Walter A. Sittig continues as Secretary-Treasurer and officially becomes General Manager. Mr. Sittig has been acting general manager for several years, since the time that Mr. Rouse ceased to be active.

In 1935 Harry W. Knoll, son of William J. Knoll joined H. B. Rouse & Company. Mr. Knoll has had extensive sales experience with the manufacturer, serving jobber, wholesaler and consumer. For the six and one-half years, Mr. Knoll was with the B. F. Goodrich Company in sales and sales promotion work.

McINTOSH WITH MONOTYPE

James C. McIntosh, formerly in charge of the Monotype department of the Brooks Printing Company, Cleveland, is now associated with the Lanston Monotype Machine Company with territory in Eastern Pennsylvania.

TAKES WEST INDIES CRUISE

Charles H. Ruth, mechanical superintendent of the Washington (D. C.) Evening *Star*, left Wednesday, February 17 for a West Indies Cruise.

CLEVENGER WITH BURGESS

F. C. Clevenger, well known among newspaper mechanical executives, is now associated with the Burgess Cellulose Co., as service representative. His headquarters will be in Toledo, Ohio.

MORE PLANE SPACE FOR AIR EXPRESS

Rapid gains in volume of shipments handled by the Air Express Division of the Railway Express Agency has led major airlines to provide additional cargo space in all new transport liners.

Leading airline systems have devoted added facilities for air shipments on latest luxurious passenger ships, whose powerful motors make possible speeds in excess of three-miles-a-minute.

Unified Air Express service of the Express Agency, which now operates over a 28,000 air mileage, completed its first year February 1.

RE-ELECT OFFICERS

At its annual dinner-dance meeting held at the Hotel New Yorker on February 20, the Club of Printing House Craftsmen of New York, Inc., re-elected its present board of officers. These are as follows: Stephen J. Lambert, President; Harvey Glover, First Vice President; John W. Donald, Second Vice President; Michael R. Stevens, Secretary and Charles F. Trapp, Treasurer.

The reception committee is composed of Stephen J. Lambert, Edward Bush, Julius C. Widmayer, Eric Anderson, James J. Hatton and Jos. Herberger. The Dinner-Dance Committee is headed by Chairman Harvey Glover.

A new Constitution and By-Laws was adopted.

NEW MILLS INSTALLED

To take care of expanding business, the E. J. Kelly Company, Kalamazoo, Mich., recently increased manufacturing capacity by more than 20%. New ink mills and other modern machinery have been installed for this purpose. New equipment has also been added to the research laboratory.

BUILDS NEW WAREHOUSE

The D. M. Bare Paper Company, Roaring Springs, Pa., has recently awarded a contract for erecting a new warehouse. According to a recent announcement by I. L. Gartland, General Sales Manager, construction is well under way. This new warehouse, located on a railroad siding, will give additional storage capacity of 1,000 tons of paper. Modern heating and ventilating will be installed throughout the new warehouse.

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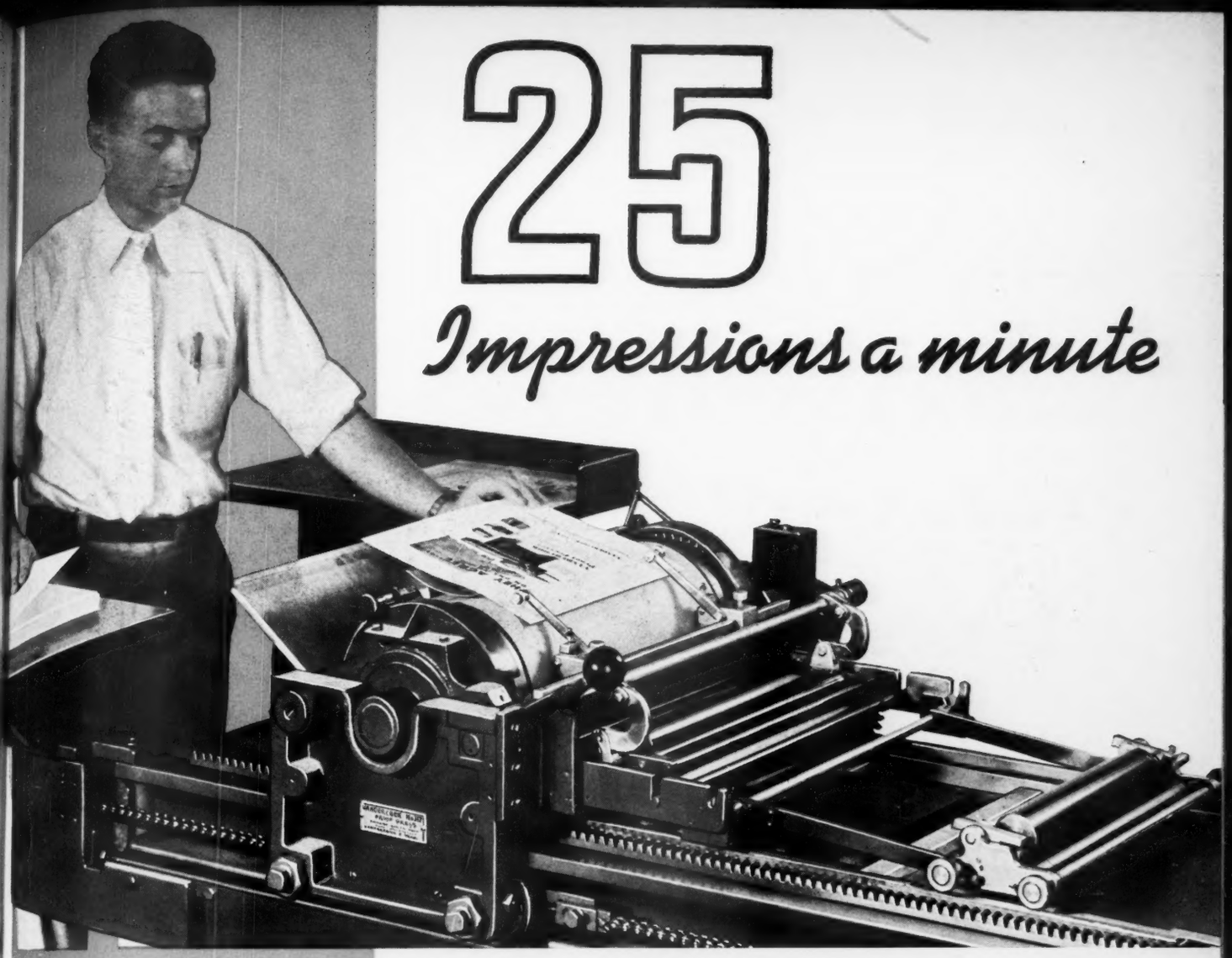

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Power
PROOF PRESS
Makes Short Runs of Fine Printing PROFITABLE

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Short runs in one or more colors can be printed on the No. 317 VANDERCOOK POWER PROOF PRESS at a maintained speed of 1500 impressions an hour and the quality equals that of the finest cylinder press.

In addition, the No. 317 VANDERCOOK POWER PROOF PRESS will print proofs with equal economy. Forms are easy to change. Register is simple and fast. Impression cylinder packing is readily accessible, permitting faster make-ready than is possible on job, automatic, or cylinder presses.

Every arrangement has been made for efficient production. Form is clear of obstructions, always convenient to the operator for changes or corrections. Wash-up is quick and easy, making color printing practical. Delivery is semi-automatic.

A circular thoroughly illustrating the various features which makes the No. 317 VANDERCOOK POWER PROOF PRESS practical and profitable for short run printing will be sent upon request. Write now.

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908 North Kilpatrick Avenue, Chicago, Illinois

Eastern Branch
220 East 45th Street, New York City

COTTRELL

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The Cottrell Rotogravure Press shown above prints two colors first side and four colors second side . . . size 34¾ x 60 . . . in four 8's, two 16's, or two 20's. All products are delivered in a patented packer-type delivery. • This press is used in the production of two leading national magazines. Write for details concerning it and other recent Cottrell rotogravure printing press constructions.

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CLAYBOURN DIVISION: 3713 NORTH HUMBOLDT AVENUE, MILWAUKEE, WISCONSIN
SMYTH-HORNE, LTD., 1-3, BALDWINS PLACE, GRAY'S INN ROAD, LONDON, E. C. 1